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POPULAR
BRITISH ORNITHOLOGY.



1. Goldfinch

2. Bullfinch

3. Greenfinch

4. Mealy Redpole

POPULAR
BRITISH ORNITHOLOGY,
CONTAINING A
FAMILIAR AND TECHNICAL
DESCRIPTION OF THE BIRDS
OF THE
BRITISH ISLES.

By P. H. GOSSE,
AUTHOR OF 'THE OCEAN,' 'THE BIRDS OF JAMAICA,' ETC.

Second Edition.

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P R E F A C E.

THE following work contains descriptions of all our British Birds, with the exception of those species of rare occurrence, which, though included in works that profess to enumerate every species that has ever been observed here, can only be considered as accidental stragglers, and are not very likely to fall in the way of the young Naturalist, for whose use this volume is intended. For these the works of Yarrell, of Jardine, and of Eyton must be consulted; but this little volume may form an acceptable and useful manual to the incipient Ornithologist, who may safely consider, that, should he procure a British bird not described in it, he has obtained possession of a prize on which, in a greater or less degree, he may plume himself. The descriptions, while adequate

and correct, will, it is hoped, be found intelligible to an unscientific reader, and not unnecessarily prolix; and to them are added brief details of the economy and habits of each species, which may properly be considered its Natural History. The value of these is increased, and the work itself embellished, by upwards of seventy coloured figures of British Birds. It is hardly needful to observe that each of these figures must be considered as an isolated representation; as to maintain anything like a relative proportion to the size of the originals, would have been impossible on such a scale; for while the Eagle or the Bustard would fill a whole page, a Tit or a Warbler, if drawn proportionally, would be scarcely larger than a pea. Some interesting particulars of the general subject will be found in the preliminary observations of each month; which also take somewhat of the form of an Ornithological calendar, and direct the young student at each season, to the objects then most worthy of his attention.

London, January, 1849.

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POPULAR BRITISH ORNITHOLOGY.

CHAPTER I.

JANUARY.

IN our young friends, whom we propose to accompany as a guide through the varying seasons of an Ornithological year, we must assume no small degree of scientific zeal at the very outset. For to leave the genial atmosphere of a snug parlour, with its carpeted floor and its blazing fire, around which a group of merry faees are gathered, and to walk out into the eutting air of a January day, with its murky sky and gusty north wind; the trees that used to throw off sparkles of living light from their glossy, quivering leaves, now still, gaunt, and leafless, or groaning as

B

they roek to and fro in the storm ; the rill that was wont to make the air musical, as it brawled and murmured among the pebbles, now bound up with frost ; the pond over whose surface the ripples chased each other laughingly to the shore, now a uniform sheet of grey ice ; the earth whose soft green turf, spangled with flowers, used to spring up beneath the little feet that gaily bounded over it, now rough, cold, and hard like the naked rock, its surface withered and brown, or whitened with patches of cheerless snow,—these might seem to promise little interest, amusement, or instruction. But we will eredit our youthful students for sufficient confidence in their guide to make the self-denying exchange, and to walk with us into the fields, though the season be winter and the month January.

Nor shall we find such a scarcity of animal life as we might have expected ; in particuler, that interesting class of beings which is to constitute the speical subjeet of our present investigations, the many-voiced and many-coloured tribes that wing their way through the regions of air, we shall find suffieiently abundant to amply repay our search for them. Very many, it is true, of those that made the summer woods alive with their flittings to and fro, and that filled the morning air with their sweet melodies, are now

no longer seen or heard ; the large tribe of delicate little creatures known as Warblers, are for the most part gone ; the swift-winged Swallows are now chasing flies over the sunny plains of Afria, while the groves around them are voeal with the twofold call of the Cuckoo, and the mournful cooing of the Turtle-dove. These and many others departed from our shores before the reign of stern winter had been established ; but then a great multitude of speies prefer to brave the rigours of the season, rather than quit their native land ; and not a few have arrived from still more inhospitable regions, to take up their winter residence with us, satisfied with that measure of relief whieh our moderate climate affords, from the iey desolation of the farthest north.

On the roofs and parapets of our houses, or on the naked twigs of our garden trees, sit little groups of Sparrows. Their neeks drawn in, their plumage puffed out, so as to eover their slender feet and proteet them from the cold, they look like little balls of feathers ; but the shaking of the breakfast table-cloth puts to flight their apparent apathy, and soon they throng into the yard, and quarrel for the erumbs, and steal from one another, with an amusing impudenee and vivacity. The Robin, perched on the corner-briek of a tall

chimney, pours forth his sprightly song for half-an-hour together; then descending, he alights on the window-sill, peeping with his bright black eyes into the warm room, modestly begging for the meed of his melody. Nor does he ask in vain; for Robin is a general favourite; the window is gently opened, and the young people retire into the background, that his timidity may not be repelled; hunger makes him bold; in he hops, and now he is on the breakfast-table, picking here a crumb and there another, and all the while thanking his kind benefactors as well as he can with sundry bobs and jerks and bows of his pretty head and long tail, displaying his bright orange bosom to the admiration of his young friends. He is soon satisfied, flits through the open door, and presently we hear his sweet notes thrilling from his elevated watch-post as before.

Scarcely more removed from the habitations of man, we may find a still smaller favourite, the minute Wren, which creeps about out-houses and fenees, through the crevices of wood-stacks, and under old logs of timber, almost like a mouse. We wonder to see through what small holes this little bird will crawl, and why he is so fond of dark crevices and obscure corners; but the fact is, he is searching for spiders, which delight in such situations, and which, with

other insects that shelter themselves there during the cold weather, form the principal part of our little Wren's subsistence during this hard season. Small as he is, there is no bird that seems to mind the cold less than he; always active, he runs about with his tail funnily erect, or flits hither and thither, the very personification of activity, and only intermits his shrill and lively song in the very severest weather; this atom of a bird,

“When icicles hang dripping from the rock,
Pipes his perennial lay;”

and defies the cold at night by creeping with several others into a sheltered hole or cranny, where they help to keep each other warm.

The various species of Tits spend the winter in this country; and during the hard weather, several of them come into our gardens and around our houses to seek for the food which has become scarce elsewhere. The elegant Long-tailed Tit, indeed, familiarly known by the names of Long-Tom and Poke-pudding, spends its time wholly in the woods and fields, but the other common species all resort to buildings. “The Great Tit,” as Gilbert White observes, “much frequents houses; in deep snows, I have seen this bird, while it hung with its back downwards, (to my no small delight

and admiration,) draw straws lengthwise from out of the eaves of thatched houses, in order to pull out the flies that were concealed between them, and that in such numbers that they quite defaced the thatch, and gave it a ragged appearance."

"The Blue Tit or Nun," proceeds this charming writer, "is a great frequenter of houses and a general devourer. Besides insects, it is very fond of flesh; for it frequently picks bones on dunghills: it is a vast admirer of suet, and haunts butchers' shops. When a boy, I have known twenty in a morning caught with snap mouse-traps, baited with tallow or suet. It will also pick holes in apples left on the ground, and be well entertained with the seeds on the head of a sunflower."

But we must not linger around the house, if we would desire to know what birds are abroad in the depth of the winter. Let us take a walk into the fields. What birds are those that have risen in a cloud from yonder pasture, on the entrance of a man with a gun into the field? Those are Fieldfares (*Turdus pilaris*), a species of Thrush that is one of our winter visitants from Norway. It comes in vast flocks in November and December, which spread themselves over the ground, while the weather is at all

open, and devour an immense number of soft-bodied animals hurtful to the farmer, as slugs and snails, worms, grubs, and maggots of various sorts. Other species of the Thrush family, as the Redwing (*T. iliacus*) and the Ring Ousel (*T. torquatus*), accompany the Fieldfares in large flocks, but the latter goes farther south to winter, merely passing through this country. The Song-thrush (*T. musculus*), the Missel-thrush (*T. viscivorus*), and the Blackbird (*T. merula*), all remain through the winter with us, and frequently associate with the flocks above mentioned in their search after food, but in less numbers. When the ground is hard frozen, worms and slugs of course can no longer be procured; and then the poor birds are in great straits; the Redwings, indeed, which cannot bear a change of diet so well as the others, die in great numbers, in the protracted severity of weather; but the other species resort to the berries which yet remain in the hedges; the white, viscid fruit of the misseltoe which ripens at Christmas affords a grateful repast to the Missel-thrush; while hips, haws, the berries of the ivy, and similar wild fruits present a resource to the others. White of Selborne had remarked for years that the root of the cuckoo-pint or wake-robin (*Arum maculatum*) was frequently scratched out of dry banks of

hedges, and eaten in severe weather. After having observed, himself, with great exactness, and induced others to do the same, he found that it was the Thrush kind which searched out this pungent farinaceous root.

The resource of insect-eating birds in a season when insect life seems almost wholly suspended, is a subject of much interest; and we shall, therefore, quote the words of two field-naturalists who have thought on the matter. "It is a matter of curious inquiry," observes White, "to trace out how those species of soft-billed birds that continue with us the winter through, subsist during the dead months. The imbecility of birds seems not to be the only reason why they shun the rigour of our winters; for the robust Wryneck, so much resembling the hardy race of Wood-peckers, migrates; while the feeble little Golden-crowned Wren, that shadow of a bird, braves our severest frosts without availing himself of houses or villages, to which most of our winter birds crowd in distressful seasons, while this keeps aloof in fields and woods; but perhaps this may be the season why they often perish, and why they are almost as rare as any bird we know."

"I have no reason to doubt that the soft-billed birds which winter with us, subsist chiefly on insects in their

aurelia state. All the species of Wagtails in severe weather haunt shallow streams, near their spring-heads, where they never freeze; and by wading, pick out the *aurelias* of the genus *Phryganea*, etc.

“ Hedge-sparrows frequent sinks and gutters, in hard weather, where they pick up crumbs and other sweepings: and in mild weather they procure worms, which are stirring every month in the year, as any one may see that will only be at the trouble of taking a candle to a grass-plot on any mild winter’s night. Redbreasts and Wrens in the winter haunt out-houses, stables, and barns, where they find spiders and flies that have laid themselves up during the cold season. But the grand support of the soft-billed birds in winter is that infinite profusion of *aureliae* (or chrysalids) of the Lepidoptera, which is fastened to the twigs of trees and their trunks, to the pales and walls of gardens and buildings, and is found in every cranny and cleft of rock or rubbish, and even in the ground itself.”

Mr. Knapp suggests that one minute insect, which every one must have observed in immense swarms during the coldest part of the year, the winter gnat, probably alone furnishes a large portion of the food of these birds. “ The portion that they require is probably small, yet it must be

insect food: and the Chats, Larks, and Grey Wagtails, seem busily engaged in providing for their wants upon the furze-sprays, amidst frozen grass, or upon the banks of ditches and pools; and as no insect but the winter gnat is now found in such places, it is probable that this creature, which sports in numbers in every sunny gleam, yields them in this season much of their support. Some of the insect-eating birds have at such periods no apparent difficulty in supporting their existence, finding their food in a dormant state in mosses, lichens, and crevices of trees and buildings; but for those which require animated creatures, I am sensible of none that are to be procured but this gnat, and it possibly has been endowed with its peculiar habits and dispositions for a purpose like this."

But the birds which are the most characteristic of the winter season with us, are those which, though they remain throughout the year in this country, are comparatively little observed through the summer and autumn, but on the setting in of cold weather associate in large flocks, and leaving the shelter of the woods, come out into the stubble-fields, the high roads, and the farm-yards, to seek their food. These are often called the hard-billed birds, forming the greater portion of the immense tribe of *Conirostres*,

birds of small size, with the beak more or less thick, and constituted for feeding on hard grains and seeds. They are all comprised under the vast family of the Finches: and to these we shall devote the descriptive part of our work for the present month.

Some of these birds, as our pretty eage-favourite the docile Goldfinch for instance, associate rather in parties than floeks; flitting on feeble wing from hedge to hedge, rifling the patches of thistles and other noxious weeds of their ripe seeds as they go, and thus performing good serviee; but others, as the beautiful but eommon Chaffinch, the Brambling, and the Skylark assemble in vast numbers on the open plains and stubble-lands, and are taken by thousands in the nets of the bird-catchers. Oecasionally too, their habits are mischievous and injurious; the Common Bunting has been known to strip a riek of barley, standing in a detached field, of its thatching, so as to leave it entirely bare; and this it had effected by seizing the end of the straw and deliberately drawing it out, to search for single scattered grains that might be casually left in the ear.

ALAUDA.

Generic Character. Beak short, straight, rather conical, the mandibles of equal length; the claw of the hind toe very long and nearly straight.

ALAUDA ARVENSIS. *The Skylark.* (Plate I.) The length of this species is seven inches, of which the tail is three. The head is covered with a lengthened crest which can be elevated or depressed at pleasure. The plumage has a mottled appearance, each feather of the upper parts displaying three shades of brown, the middle line being the darkest, and the edges the lightest; the outer feather of the tail on each side is white, with a dash of brown on the inner web, the next is dark brown, with a white streak on the outer web; the rest are all brown: the throat and chest are pale brown, spotted with dark brown; the under parts are yellowish-white.

The Skylark is abundant in all parts of this country, where it remains the whole year. It builds on the ground, commonly in the shelter of grass or young corn, and lays four or five eggs of a greenish-grey hue, mottled with darker shades.

1 Starfinch

2 Yellowhammer



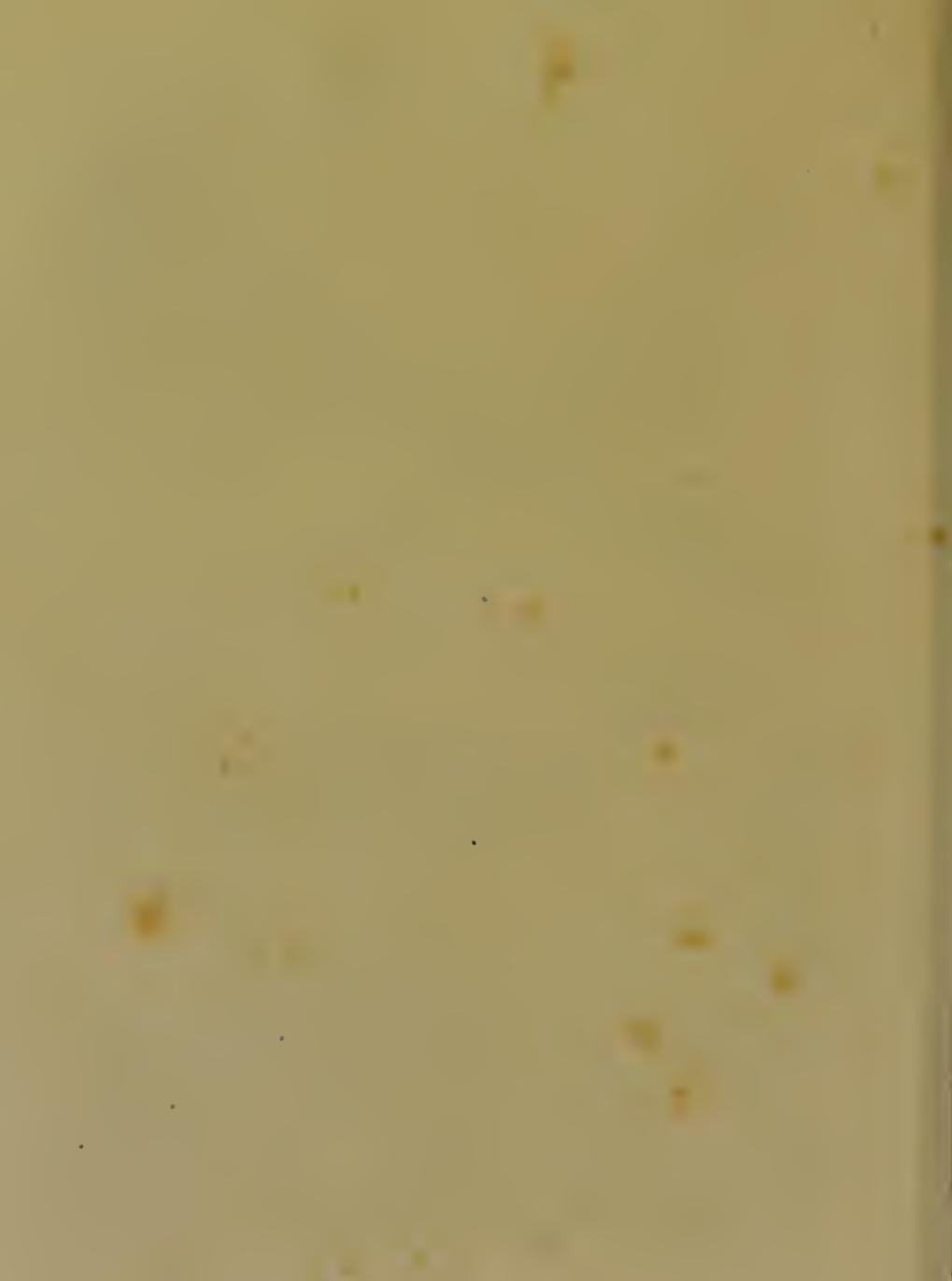
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1

3 Snow Bunting 4 Sky lark



4



The joyous song of this sweet bird, poured forth upon the morning air, as it soars far, far up into the boundless sky till the eye eannot follow it, has been the theme of many a poet; yet none perhaps has ever uttered a more graeeful thought eonnectioned with it than Graham, who thus alludes to its soaring song in eontrast with its habit of nesting among the elods and tufts of the lowly earth :—

“ Though, simple bird, thou dwellest in a home
The humblest; yet thy morning song aseends
Nearest to heaven.”

ALAUDA ARBOREA. *The Woodlark.* Rather less than the preeeding; and though very closely like it in plumage, it may be distinguished by its shorter tail, and by a pale stripe passing over each eye.

This is also an esteemed songster, and though its music has not the power or the variety of the Skylark’s, it is superior in tone, more tender, sweet, and plaintive. Like its relative, this speeies sings as it soars,

“ — high in air, and poised upon its wings,
Unseen the soft, enamour’d Woodlark sings;”

but it pours forth its clear flute-like melodies, also, when perched upon the topmost twig of a tree. It breeds on the ground like the preeeding; its eggs are reddish-white,

speckled with brown. Two or three other species of this genus have been met with in Britain, but they are very rare.

EMBERIZA.

Gen. Char. Beak short, conical, the sides compressed, the lower mandible the larger; a hard knob on the palate.

EMBERIZA NIVALIS. *The Snow Bunting.* (Plate I.) Length six inches and a half. In the breeding season the dress of this bird is very beautiful: the head, the whole under parts, the wing-coverts and tertials, and the three outer feathers of the tail are pure white; the rest of the plumage is black. But as it is only a winter visitor to this island, we rarely see it in its nuptial beauty; but with the head become tawny brown, and all the black plumage of the upper parts tipped with the same colour.

This bird, an inhabitant of the northern regions of Europe and America, visits this country in large flocks late in autumn, and retires in April. It feeds on grass-seeds and other grains; running on the ground, and rarely perching on trees.

EMBERIZA MILIARIA. *The Common Bunting.* Length seven inches and a half. The plumage above is pale reddish-brown, each feather streaked with dark brown as in

the Larks ; the wing and tail feathers dark with pale edges ; the whole under parts dull white, with brown spots on the breast, and streaks on the sides.

This species, common throughout the country, has neither melody nor beauty to recommend it. It feeds on grain ; and is caught with Larks in large flocks for the table. Its nest, a rather coarse structure of straw and dry grass, is placed on or near the ground ; four or five eggs are laid, of a purplish white, with dark spots and dashes.

EMBERIZA SCHÖENICLUS. *The Reed Bunting.* Length six inches. The whole head is black, bounded by a collar of white, extending from the gape on each side ; the throat and breast are also black ; the feathers of the back, wings, and tail, black with rusty edges ; the under parts white, dashed with brown.

A common bird in marshy places, the border of lakes and rivers, and similar situations : the nest is placed on the ground, hidden by long grass or reeds. This species feeds in summer on insects as well as grain and seeds ; in winter it associates in flocks, and frequents gardens and farm-yards.

EMBERIZA CITRINELLA. *The Yellow Bunting.* (Plate I.) Length seven inches. The head and neck bright yellow, spotted with black ; the feathers of the upper parts rich

chestnut-brown, margined with yellow, with darker centres; wings blackish, with yellow edges: the under parts bright yellow, clouded with reddish on the sides.

This species, called also the *Yellow Ammer*, is one of the most beautiful, as well as one of the most abundant of British birds; every road, every hedge, every lane, and almost every garden in the country presents specimens in greater or less number. The male sings, but with no great pretension to melody; he is an attentive and kind husband, relieving his mate of her wearisome sitting on the nest. The latter is a substantial structure of moss and hair, concealed under a bush or tuft of grass; the eggs are bluish white, speckled and veined with brown.

EMBERIZA CIRLUS. *The Cirl Bunting.* Length six inches and a half. The head is dark olive, with a streak over the eye and a patch on each cheek, bright yellow; the back rich chestnut; the wings and tail blackish with yellow or reddish edges; the chin and the throat black; a broad crescent of yellow on the breast; the under parts dull yellow, with a band of chestnut across the belly. The colours of the female are much more dingy; and she is destitute of both the black and the yellow on the head and throat.

This species is rather scarce in Britain: it frequents trees more than the preceding; but resembles it in its notes, and in its breeding habits. It is said to feed on the berries of the deadly nightshade (*Solanum Dulcamara*), which are poisonous to man.

FRINGILLA.

Gen. Char. Beak straight, longer than deep, conical, and pointed; the mandibles nearly equal, the division forming a straight line; the claws of moderate length, and curved.

FRINGILLA CŒLEBS. *The Chaffinch.* (Plate I.) Length six inches. The crown and nape dark blue, black on the forehead, the back chestnut, the wings black, with two conspicuous white bars; the quills with pale edges; the rump yellowish-green; the tail black, paler in the centre; the outmost feather white with a black tip; the face, throat, and whole under parts, soft reddish-brown, paler beneath.

This is one of our handsomest common birds, and as its song is excellent, it is a general favourite: on the continent, it is the bird most frequently kept in a cage. The females separate from the males in the winter, whence Linnæus gave the species the name of *Cœlebs*, which signifies *bachelor*. The nest is an extremely neat structure

FRINGILLA MONTIFRINGILLA. *The Brambling or Mountain Finch.* Length six inches and a half. The plumage of the upper parts is mottled with black and fawn-colour, each feather black with a fawn edge and tip; the smaller coverts of the wings are of a rich fawn-colour, tipped with white; the rump is white, the tail black edged with whitish; the throat and breast delicate fawn-colour, merging into white upon the lower parts. In summer, the head and neck are of a rich black, the brown tips of the feathers being dropped.

This beautiful bird is a winter visitor to this country, and is not very common; it breeds in Norway and Lapland. Its song has some resemblance to that of the Chaffinch, but is much inferior.

FRINGILLA MONTANA. *The Tree Sparrow.* Length five inches and a half. The head and neck are reddish-brown; a white stripe on each side proceeds from the mouth downwards, and running backwards forms a sort of collar; the plumage of the upper parts is chestnut, the centre of each feather being black; the wing-coverts are tipped with white, the rump pale brown; the tail dusky with pale edges; the thorax black, and this colour appears also on the upper side of the white stripe of the cheeks; the rest of the under parts dull drab or pale brown.

With much resemblance to the House Sparrow, this is a handsomer bird, and much less common : the two species sometimes associate together in rural districts, and build their nests in the thatch of the same barn. From the shortness of its legs, this species when hopping on the ground, has a gait different from that of its more domestic relative. It is scattered over the elder parts of Europe and Asia.

FRINGILLA DOMESTICA. *The House Sparrow.* The length of this familiar bird is about six inches. The top of the head and cheeks are bluish ash-coloured ; the rest of the upper parts chestnut-brown, with blackish centres ; some of the smaller wing-coverts are tipped with white; the rump is pale brown ; the tail dark brown with pale edges ; a stripe behind the eye, the chin, and throat, black in the males, the under parts dull greyish-drab.

Those who have seen Sparrows only in the streets and yards of a crowded city, where the plumage is begrimed with smoke, would hardly identify the clean and bright-looking bird of the country, which really possesses considerable pretensions to beauty of dress. The habits of the Sparrow, its impudent familiarity, its quarrelsomeness, its greediness, are well known, and are more amusing than pleasing : the number of noxious caterpillars destroyed by

it in the breeding season renders it however a very useful bird, and compensates for its depredations at other times.

COCCOTHRAUSTES.

Gen. Char. Beak conical, short, very large at the base, tapering to a point, the division forming a curved line; head large; wings long; tail short, and forked.

COCCOTHRAUSTES CHLORIS. *The Greenfinch.* (Frontispiece.) Length six inches. The plumage of this well-known bird is generally of a yellowish-green, becoming more decidedly yellow on the rump and on the under parts: the edge of the shoulder, and the margins of the quill-feathers are bright yellow; the tip of the tail is blackish, and its edges yellow; the large beak is flesh-coloured.

The song of the Greenfinch has not much to recommend it; but it improves by education; it may be taught to repeat words. The docility of this bird is remarkable; it is made extremely tame with ease, and is readily taught many pleasing tricks. It is found with us the whole year; its nest is built in April, in hedges or bushes; the eggs are purplish white, spotted with purple and brown.

COCCOTHRAUSTES VULGARIS. *The Hawfinch.* Length seven inches. The upper parts are chestnut-brown, paler

on the head and rump, and becoming grey on the neck ; the wing-coverts are white ; the quills black, with some white on the inner webs ; several of these are singularly hooked at the tips : the tail is white, but the edge on each side is black : the face and throat are black ; the under parts pale brown ; the beak, which is very large, is blue, and the eye is white.

These birds abide with us through the year, and are particularly numerous in Epping Forest, where the hornbeam abounds, on the seeds of which they feed. They are excessively shy, and difficult of approach.

CARDUELIS.

Gen. Char. Beak regularly conical, lengthened, taper, sharp-pointed, the division-line slightly winding, wings rather long ; tail forked ; general form elegant.

CARDUELIS ELEGANS. *The Goldfinch.* (Frontispiece.) Length five inches and a half. The whole face crimson ; the cheeks and ear-coverts white ; the crown and hind-head black, descending on each side in a curve, and margined with whitish ; back and rump brown ; wings and tail black, tipped with white, the middle portion of the wings rich yellow : under parts whitish or drab ; beak and feet flesh-coloured.

The Goldfinch is no less admired for his elegant beauty, and his cheerful and constant melody, than for his extreme docility and susceptibility of attachment to those who tend him. It is indeed a most affectionate little bird; and there is none, except the Canary, which is in more general demand as a caged pet. It flits about in winter in small flocks, feeding on thistle seeds, and is very easily caught. Its nest is a beautifully neat structure, the materials compactly felted together.

CARDUELIS SPINUS. *The Siskin.* Length four inches and three-quarters. The crown, face, and throat are deep black; the upper and under parts yellowish green, streaked with black, becoming yellow on the rump; the wings black, the feathers tipped and edged with yellow; the tail yellow at the base, and dusky black at the tip: the beak is orange-coloured.

We see this little stranger only in the winter season, when it visits us in flocks from the colder regions of Europe. In Scotland it is more numerous than in the south, where some pairs occasionally remain to breed. It feeds on seeds.

CANNABINA.

Gen. Char. Beak short, straight, but somewhat swollen at

the base, conical, and pointed ; wings long and pointed ; tail forked ; feet short, claws very slender.

CANNABINA LINOTA. *The Common Linnet.* Length five inches and three-quarters. The crown and forehead scarlet, the feathers being grey at the bases ; sides and back of the head and neck greyish ; upper parts chestnut-brown ; wing quills and tail feathers black, with narrow white edges ; chin and throat grey, mottled with dusky ; breast scarlet ; under parts pale yellowish-brown : the under surface of the tail is barred with grey and white. In autumn and winter the males lose the red colour of the head and breast : and the females are destitute of it at all seasons.

Linnets associate in flocks, and frequent open plains and downs, especially where furze-bushes abound. They are active and sprightly, roving from spot to spot, feeding on the seeds of many common weeds. The song of the Linnet is clear, brilliant, and flute-like in its tones, and is protracted into several varied melodies. It is hence frequently kept in a cage.

CANNABINA CANESCENS. *The Mealy Redpoll.* (Frontispiece.) Length five inches and a quarter. The forehead and crown are rich deep crimson ; the upper parts of the body rusty brown, mottled with white ; rump rose-red ; wings and tail dull brown with tips and edges of whitish ;

the tail much forked; throat black; breast rose-red; the under parts dull white. This is the summer plumage; in autumn, the tints are duller, and the red is almost wholly lost.

There is a smaller bird, known as the Lesser Redpoll, but whether it is a distinct species or only a variety, is still a matter of dispute. The Redpolls are properly inhabitants of the northern regions of both hemispheres; but many flocks visit this island in the winter, and many are caught by the London bird-catchers: their song is feeble, but their docile manners are pleasing.

CANNABINA MONTIUM. *The Mountain Linnet.* Length five inches and a quarter. The general form is more slender, and the tail longer than in the other Linnets: the head and upper parts are brown, the centres of the feathers darker than the edges; the rump is red in summer, but there is no trace of this hue on the head or breast at any season; the throat and breast yellowish-brown, the latter streaked with darker; the under parts paling to whitish; the beak is yellow.

In the north of Scotland, and in mountainous districts farther south, this bird is common all the year, building its nest on the ground among the heath or grass. It feeds on various seeds, but in winter large flocks resort to farm-yards, picking grain from the oat-ricks. It is sometimes known

by the name of *Twite*, from a resemblance of its note to that word.

PYRRHULA.

Gen. Char. Beak short and thick, swelling on all sides ; the upper mandible overlapping the lower, both at the edges and the tip ; the outline of both rounded ; wings rather short ; general form stout.

PYRRHULA VULGARIS. *The Bullfinch.* (Frontispiece.) Length six inches and a half. The throat, face, crown and hind head, the wings, rump and tail, deep black ; the nape, back, and smaller wing-coverts delicate bluish-grey ; a band of white crosses the wing ; the sides of the head, breast, and belly are pale red ; the under tail-coverts white.

This beautiful bird is but too well known in gardens and orchards, where its depredations on the unopened flower-buds of fruit-trees in spring, often destroy the hopes of autumn : at other times of the year it feeds on berries and seeds. It is a constant resident in this country, building in secluded situations. It is frequently kept in a domestic state for its powers of imitation, which are very remarkable.

PYRRHULA ENUCLEATOR. *The Pine Grosbeak.* The beauty of this fine bird induces us to mention it, though it is but a rare and accidental visitor from the north. It is of

a rich scarlet hue, the wings and tail greyish-black; the wing-coverts broadly tipped with white. The length is eight inches.

LOXIA.

Gen. Char. Beak rather long, stout, compressed, the mandibles crossing each other at the tips; tail short; legs short; feet strong.

LOXIA CURVIROSTRA. *The Common Crossbill.* Length six to seven inches. Entirely of a crimson hue, most vivid on the head, rump, and breast, becoming almost white on the lower belly: the wings and tail tinged with brown. Individuals vary much in colour, the red being often mingled with yellow, or with green, in various proportions.

Many of the actions of these birds resemble those of the Parrots; climbing and clinging with the feet and beak. The singular structure of the beak enables them to force open the scales of pine and fir cones, and to extract the seed with the tongue. They also eat apples into pieces, as if with scissors, to get at the pips. Flocks of these singular birds arrive at our shores from northern countries at irregular periods, and at all seasons, but most abundantly in autumn.

CHAPTER II.

FEBRUARY.

THOUGH this is not unfrequently the bleakest and coldest month of the year, yet if we walk abroad through meadow, lane, and grove, with an open eye and ear, we shall not lack any indications that the course of nature is already beginning to anticipate, as it were, its emanipation from the icy bands of winter. Not a few flowers are hardy enough to dare the frosty gales of February, and regale us with their early loveliness: the erocus and the primrose open their yellow blossoms in the sheltered lane, the creeping crowfoot and the dandelion appear in the meadows, and by the side of the river flaunts the yellow coltsfoot. Under the shelter of the hedge the modest snowdrop is hanging its lovely head, and the corners of the fields are

gay with the showy daffodil. In our gardens we are pleased to notice the winter aeonite, the polyanthus and the double daisy, the stock and the wall-flower, and the white heads of blossom upon the laurustinus. The catkins of several of our trees are observed to be lengthening; of these the hazel is one of the first: but towards the end of this month those of the willow, the filbert, and the birch are seen to be extending, to be losing their hard compact form, and on examination prove to be composed of a multitude of minute and now opening flowers. Several insects that have survived the winter awake from their torpidity; the tortoise-shell butterfly will come out on a sunny day and dance on the wing along the hedgerows and banks, and the beautiful brimstone flits to and fro through the woods; the rigid and mailed dorr,—

“The shard-born beetle with his drowsy hum,”—

lifts up the earth on mild evenings, and “wheels his droning flight” in headlong circles in the dim twilight; and on the knolls of the upland fields the field-cricket opens the door of his earthly chamber, and sits in its mouth, or leaps among the surrounding grass. Spiders shoot forth their webs, and the light gossamer, “woven air,” floats; flies

buzz on sunny banks, earth-worms resume their nocturnal activity, and wood-snails begin to crawl among the herbage.

These are pleasing little indications of approaching spring which present themselves to the inquisitive eye of the observant naturalist, to whom the receding or advancing steps of animal and vegetable life are always a source of unfailing delight. But we have not yet spoken of the peculiar subjects of our own investigation. The birds, the sweet birds! where are they? They are not wanting: those of which we spoke in the preceding month, the Thrushes, and the various tribes of Finches are still associated in flocks, and frequent the same localities as before. The Grey and the White Wagtail, which during the greater part of the year reside in the northern parts of the island, are seen in this month spread over the plains of the midland and southern districts, running briskly with nimble feet along the banks of the brawling stream or around the edges of the village pond. The male Chaffinches have joined their runaway spouses, who for a little time had left them behind, and the flocks now appear pretty equally composed of both sexes. And what is still more interesting, various species begin to utter their equally varied voices; not all, it is true, alike tuneful to the musical ear, but all expres-

sive, all telling that the season of eourtship and of nuptial joy is now at hand. For the song of birds seems to be, (mainly at least, and in a wild state,) the language of love ; it is the language with whieh the male bird woos his mate during the season of courtship, and eheers her during the fatigues of ineubation. The remarks of an eminent ornithologist, Colonel Montagu, are so interesting on this subjeet, that we willingly quote them : "The males of song-birds and many others, do uot in general search for the female ; but on the contrary, their business in the spring is to pereh on some eonspicuous spot, breathing out their full notes, whieh, by instinct, the female knows, and repairs to the spot to choose her mate. This is particularly verified with respect to the summer birds of passage. The Nightingale, and most of its genus, although timid and shy to a great degree, mount aloft, and incessantly pour forth their strains, each seemingly vying in its love-laboured song before the females arrive. No sooner do they make their appearance than dreadful battles ensue, and their notes are considerably changed : sometimes their song is hurried through without the usual graee and eleganee ; at other times modulated into a soothing melody. The first we eoneeive to be a provoeation to battle on the sight of another male ; the last

an amorous cadence, or courting address. This variety of song lasts no longer than till the female is fixed in her choicer, which is, in general, in a few days after her arrival; and if the season is favourable, she soon begins the task allotted to her sex.

"The male now no more exposes himself to sing as before, nor are his songs heard so frequently or so loud; but while she is searching for a secure place to build her nest in, he is no less assiduous in attending her with ridiculous gestures, accompanied with notes peculiarly soft. When the female has chosen a spot for nidification, the male constantly attends her flight to and from the place, and sits upon some branch near, while his mate instinctively places the small portion of material she each time brings to rear a commodious fabric for her intended brood. When the building is complete, and she has laid her portion of eggs, incubation immediately takes place. The male is now heard loud again, but not near so frequently as at first; he never rambles from her hearing, and seldom from her sight; if she leaves her nest, he soon perceives it, and pursues her, sometimes accompanied with soft notes of love. When the callow brood appears, he is instantly apprised of it either by instinct, or by the female carrying away the

fragment-shells to some distant place. The male is now no more heard in tuneful glee, unless a second brood should force the amorous song again: his whole attention is taken up in satisfying the nutrimental calls of his infant race, which he does with no less assiduity than his mate."

These remarks specifically apply to that extensive family of birds known as Warblers, most of which are but summer visitants of our clime; but in principle we believe their truth to be of general application; nor will their introduction into the present month seem out of place, when we consider how many are now beginning to be vocal. The Missel Thrush and the Song Thrush, those eminent musicians, begin to pour forth their tuneful strains in sheltered situations, early in this month, and are soon joined by the rich mellow whistling of the Blackbird; while above them the Skylark soars higher and higher into the bright sky, chanting his morning hymn of praise as he ascends. The Yellowammer exposing his golden bosom on the topmost twig of some thorn-hedge, announces his presence with a song, which if not very loud or varied, is a pleasing ditty; and the sprightly warbling of the Chaffinch, resounds from the coppice and the orchard. The short and simple strain of the Hedge Sparrow is poured forth from the centre of some yet leafless

bush, or evergreen ; and sometimes the pleasant melody of the Goldfinch may be heard from the hedgerow. And there are many other birds whose voices, though they might not seem to have anything to recommend them to the lovers of sweet sounds, or might in themselves be even harsh and unpleasant, yet tell the same tale, and are doubtless attractive to the ears for which they are intended. The vivacious and active Tits utter a chattering succession of notes about this time, as they hang and creep about the twigs of trees ; the Nuthatch erics “ quank, quank,” as he runs, mouse-like, up and down the bark ; the Sparrows begin to chirp with monotonous pertinacity from the roofs and rain-gutters of our houses ; while in the woods the harsh rattling cry of the Woodpecker is relieved by the plaintive cooing of the gentle Ringdove ; and the loud and melancholy hoot of the Tawny Owl is heard at nightfall, as it issues forth from its gloomy recesses in the thick woods to seek its nocturnal prey.

But before the month has run its short course, the business of preparing for a family is actually begun by some species. The Thrushes are among the earliest of birds to begin their domestic economy ; the Missel Thrush, the Song Thrush, and the Blackbird are frequently associated

in pairs about this time ; and the Partridge also has provided himself with a mate. The birds of the Crow family are also very early breeders : in the first week of February the Rooks are visiting the trees on which the last year's nests still remain, and we may well suppose that a very scientific examination and consultation takes place concerning their condition : for it is not long before we see the birds busily and clamorously engaged in repairing the old structures, or constructing new ones. The Carrion Crow about the same time, or even earlier, is similarly engaged in the seclusion of the woods, far from the haunts of man ; while even still earlier the sagacious and keen-sensed Raven has sought his solitary nest on the craggy rock, or on the summit of some lofty and inaccessible tree, and is putting it in order for his approaching family ; and the sauey Jackdaw is doing a similar thing, " rooked in the spire " of the ancient village church, or in the ivy-crowned tower that remains the only standing memorial of some baronial castle of yet older times.

We will now introduce our readers to these early breeders, the families *Turdidæ* and *Corvidæ*, the Thrushes and the Crows.

TURDUS.

Gen. Char. Beak moderately long, straight; upper mandible arched to the tip, which is distinctly notched; a few weak bristles at the gape; wings long; legs and feet long and slender.

TURDUS VISCI VORUS. *The Missel Thrush.* Length eleven inches. Upper parts dark brown; wings umber-brown, with pale edges to the coverts; the tail umber-brown; under parts pale yellow, with many black spots, those on the throat and breast arrow-shaped, and the rest oval, or round.

This is the largest of our Thrushes, and is a handsome bird: it remains the whole year with us, but is not numerous. Its song, which is generally poured forth from the topmost twig of a tree, but sometimes when upon the wing, is plaintive and musical, consisting of five or six broken strains, somewhat like those of the Blackbird. From its habit of frequently singing during wind and rain, it is sometimes called the Storm-cock. The nest is placed in the fork of a tree, and is composed of coarse stalks, grass, etc., coated inside with mud, and then lined with fine grass. Four or five eggs are laid, of a greenish-white hue, spotted with dark reddish-brown.

TURDUS PILARIS. *The Fieldfare.* Length ten inches.

Most of the upper parts are ash-grey, but the middle of the back, and the wings are rich rust-brown; the quill-feathers are dark bluish-grey; the tail black; the chin and throat are golden brown, becoming redder on the breast, the under parts white; the throat is strewn with narrow dashes of black, which on the breast become heart-shaped spots.

The Fieldfare is a constant but brief winter visitor to this country, seldom arriving much before December, and departing to its northern home again in spring. They come in immense flocks, and alight on meadows and pastures, searching for slugs and worms; but in frosty weather they resort to the woods and hedges, feeding on berries, such as those of the thorn, the holly, and especially of the mountain ash. A continuance of severe weather, however, is often very destructive to them, when they die by thousands. The voice of the Fieldfare is harsh and unmusical, and hardly worthy to be called a song.

TURDUS MUSICUS. *The Song Thrush.* Length nearly nine inches. Whole upper parts dark brown, approaching to olive; the feathers of the wings with pale edges; the chin and throat whitish, with a dark line on each side; the breast and sides buff, with triangular brown spots; the belly white, with the spots fewer and more oval; the beak and feet pale brown.

1. Goldfinch
2. Grey Shrike
3. Golden Oriole
4. Blackbird



The brilliant and powerful song of this charming bird, uttered in the morning and evening, from some favourite tree in the wood, is well known, and always heard with delight by the lover of nature. The Song Thrush is common in every part of this country, and is a constant resident. It breeds very early, frequently selecting the thick shelter of an evergreen bush : the nest, composed of rough materials externally, is smoothly plastered within with moist clay or cow-dung : the eggs are of a clear pale blue, with a few dark spots. Snails form the principal food of this bird : these it beats against a stone to break the shell to pieces, which it cleverly gets rid of by a strong shake with its beak.

TURDUS ILIACUS. *The Redwing.* (Plate II.) Length eight inches and a half. Whole upper parts dark brown ; a pale streak passes over the eye ; the cheeks and ear-coverts deep brown ; under parts whitish, merging gradually into the dark colour on each side ; the upper breast, and the sides of the neck and of the belly, are studded with brown dashes ; the inner surface of the wings, and the sides, are bright orange-red.

The Redwings come to us from the north in large flocks, on the approach of winter, but arrive a month before the Fieldfares ; they are not so hardy as the latter. Linnæus

speaks highly of the song of this bird in Lapland : he says, " Its anorous warblings from the top of the spruce fir were delightful ; its high and varied notes rival those of the Nightingale itself."

TURDUS MERULA. *The Blackbird.* (Plate II.) Length ten inches. Whole plumage glossy black : beak and eyelids brilliant yellow. The female is of a yellowish-brown hue with a few darker spots on the breast.

Like the Thrush, this species is a well-known and favourite cage-bird. Its song is rich and mellow, but too loud to be pleasing in a house ; it is a bird of much docility, and will readily learn to imitate the voices of other birds. He is fond of fruit, and hence is often shot as a pest ; but the immense number of noxious insects, slugs, and snails, which the Blackbird devours at other seasons, abundantly compensates for his petty pilferings from the garden-wall. This bird resides all the year with us ; its breeding habits are much the same as those of the Song Thrush.

TURDUS TORQUATUS. *The Ring Ouse.* Length eleven inches. General colour a dull black, but the feathers have the margins and tips greyish, particularly conspicuous on the inner quill-feathers ; across the breast there is a broad crescent of pure white.

Though migratory, the visits of this handsome species take place at a season opposite to those of its fellows; for the Ring Ousel comes to us from the south, and spends the summer months in this country. It breeds in Scotland, but not numerously, selecting some slight shelter on the ground, as a stone, or stump, or bush. The food and manners of this species are much like those of the Blackbird; and so is its note of alarm, but its song is more melodious and agreeable. Like most of the genus, the flesh, especially when the bird is fat through feeding on luscious fruits, is delicious eating, and many are taken for the table.

CINCLUS.

Gen. Char. Beak slender, straight, scarcely notched; forehead small and narrow; wings short and rounded; tail rather short; feet large and strong; general form short and plump.

CINCLUS AQUATICUS. *The Water Ousel or Dipper.* Length about seven inches. Whole upper parts greyish-black; throat and breast pure white; lower breast maroon or dark chestnut, shading into black on the sides and belly.

The habits of this little bird, which is to be found all the year round, in the vicinity of mountain streams, are very remarkable, as without being web-footed, it is scarcely less

a water bird than a duck. It feeds on the small shelled animals which creep at the bottom of rivers and pools, and the larvae of various water insects. To obtain these it has the power of remaining a considerable time beneath the surface, and, as some observers assert, even of walking on the bottom, as if it were dry land. Scarcely ever are more than a pair seen in one locality, and these continue to haunt the same stream from day to day; the male frequently sitting on a stone or overhanging twig to pour forth his simple but sweet song, sometimes during the night. Its nest is a globose structure of moss, with a small hole in one side, through which the bird obtains ingress and egress; it is commonly concealed beneath a stone, often under a cascade; the eggs are four or five, of a pure white.

ORIOLUS.

Gen. Char. Beak straight, hooked at the tip, rather wide and flat at the base; wings moderate; feet rather short and weak; the toes united at their base.

ORIOLUS GALBULA. *The Golden Oriole.* (Plate II.) Length nine inches. The head and body are brilliant golden-yellow; the wings and tail are black, the former narrowly tipped with white, the latter broadly with yellow;



1 Raven 2 Magpie

a black streak passes from the beak to the eye. The female is yellowish-olive on the upper parts, dull white beneath, streaked with dark brown; wings and tail dull brown.

This brilliant bird is a rare summer visitant to us: it frequents secluded woods and forests. The nest is a beautiful structure, being formed like a purse, hung between two twigs. The Oriole feeds on caterpillars and other insects.

CORVUS.

Gen. Char. Beak strong, compressed, curved towards the tip; nostrils covered by stiff bristly feathers pointing forwards; wings long, pointed; feet strong.

CURVUS CORAX. *The Raven.* (Plate IV.) Length twenty-six inches. Whole plumage black, glossed with steel-blue and purple, especially on the breast.

This is a large and powerful bird, well-known and hated in pastoral districts, for his depredations on the newly-born lambs, and on such of the flock as are weak from disease. It is exceedingly sagacious both in a wild state and in domestication; it is considered an amusing pet, from its cunning and tricks, as well as for its power of pronouncing words and sentences with great distinctness. The Raven builds in very lofty trees or on craggy precipices.

CORVUS CORONE. *The Carrion Crow.* Length eighteen inehes and a half. Whole plumage blaek, glossed on the upper parts with violet and green refleſtions. The feathers of the tail shorter and broader in proportion than those of the Raven, whieh it much reſembles.

It haunts woods more than the open country; lives in pairs, and builds in lofty trees and solitude. Animal food living or dead, or in a state of putreſeenee, is weleome to the Crow: it pounceſ upon game, poultry, young birds, even fishes in the shallows; nor does it refrain from larger animals, frequently tearing out the eyes of those that are in a siekly condition.

CORVUS CORNIX. *The Hooded Crow.* Length twenty inches. The head, throat, and front of the neek, the wings and the tail, are glossy blue-black; all the rest of the plu-mage a dull smoky-grey.

In Scotland this bird is a constant resident, but in England it appears only during the winter; the flocks whieh visit us are ſuppoſed to come from Norway. Its habits are much like those of the preeeding, but it more frequents the ſea-shore, and the vicinity of fresh waters. Large floeks build in the erevies and chasms of the isles of Scotland, where they ſeem to replace the Carrion Crow.

CORVUS FRUGILEGUS. *The Rook.* Length nineteen inches. Whole plumage black, glossed with purple; the skin at the base of the beak, and on the chin and throat, naked of feathers, and warty; and this is the principal differencee between the appearanee of this bird and of the Carrion Crow. In habits, however, it is distinguished by its sociality, large flocks living together, and building a great number of nests on the same trees; and by its partia- lity for the abodes of man, for these congregations of nests and colonies are almost always in the neighbourhood of a human habitation.

The Rook is far less carnivorous than the other species of the family; insects form the chief portion of its food, and particularly the voraeious grubs of those speeies that lie at the roots of grass; by devouring these it proves a valuable assistant to the agriculturist. The elamorous cawing of the Rook, espeecially when towards evening the colony eome home to rest, though a sound harsh in itself, is pleasing when mellowed by distanee, being connected with many grateful assoeiations.

“Where the towering forest spreads
Shelter for the lordly dome,
To their high-built airy beds
See the Rooks returning home.”

CORVUS MONEDULA. *The Jackdaw.* Length fourteen inches. Eyes white; the crown of the head, back, wings, and tail black, but slightly glossed; the ear-coverts, hind-head, nape and sides of the neck smoky-grey; the throat and whole under parts rusty-black.

In sociality, liveliness, and activity, the Jackdaw is not inferior to the Rook; but it displays a different instinct in building. It chooses tall buildings, as church-towers, castles, chimneys, and ancient hollow trees, and on the sea-coast the crannies of craggy rocks, for the scene of its domestic economy, where, in a large loose nest of sticks, it lays four or five eggs of a bluish-white spotted with brown. Its feeding is somewhat indiscriminate.

PICA.

Gen. Char. Beak as in *Corvus*; wings short and rounded; the first quill-feather short, and narrowed; tail long and graduated.

PICA MELANOLEUCA. *The Magpie.* (Plate IV.) Length eighteen inches, of which the tail is about eleven. The head and upper parts are deep glossy black, paler on the rump; the wing-coverts and tertials fine shining blue; the scapulars, or feathers that lie between the wings and the



1 Golden Eagle

2 Peregrine Falcon

3 Merlin.

body, pure white, forming an oblique band on each side ; the tail brilliantly glossed with green, changing to purple and blue near the tip ; throat and breast black ; lower parts pure white.

This beautiful bird is as watchful and cunning, as it is handsome ; "it is a great enemy to the husbandman and preserver of game ; but has cunning enough to evade their wrath." It eats any animal substance ; poultry, eggs, young lambs, the young of game, fish, carrion, insects, fruit, and even grain, when nothing else is to be got. The Magpie is associated in pairs all the year ; they build a large domed nest, with a small hole in the side, in some thick bush. It is docile, and capable of imitating speech and many other sounds, is fond of notice, and very amusing in captivity ; and hence, as well as for its beauty, is often kept as a domestic pet.

GARRULUS.

Gen. Char. Beak shorter than the head, straight, with the tip bent down, distinctly notched ; wings rounded ; legs and feet weaker than in *Corvus*, formed rather for perching than for walking.

GARRULUS GLANDARIUS. *The Jay.* (Plate IV.) Length

about fourteen inehes. The forehead and crown pale grey, streaked with black, the feathers long and loose, forming an ereetile crest; nape of the neck purplish; the back cinnamon-red; the wing-coverts elegantly barred alternately with black, white, and blue; the wings black, with a broad patch of pure white at the base of the quills; the inmost quills chestnut-brown; the rump and tail-coverts pure white; tail blackish, paler towards the edges; throat whitish; breast and belly pale cinnamon-red, becoming almost white beneath; a band of deep black passes down on each side of the throat, from the beak.

This is indeed a beautiful bird, and has all the liveliness, watchfulness, and cunning of its tribe; it feeds, however, much more on vegetable diet, such as acorns, beech-mast, the seeds of various trees, etc., and hence is less mischievous; sometimes, however, it sucks the eggs of other birds, and robs the garden of cherries and wall-fruit. It is easily tamed, and becomes an agreeable and playful pet. Its nest is frequently placed in a thick bush or low tree; and contains five or six eggs of a yellowish ground, thickly covered with minute specks of brown.

FREGILUS.

Gen. Char. Beak longer than the head, stout at the base, tapering to a point, and curved through its whole length; wings long, but rounded; tail square; feet strong.

FREGILUS GRACULUS. *The Chough.* Length seventeen inches. Plumage black, glossed with blue, particularly on the wings; the beak, legs, and feet, as well as the eyelids, bright scarlet; the claws black.

On the high cliffs that form so large a portion of the coast of these islands, the Chough abounds, never venturing, at least in this country, far inland. It feeds on insects, and sometimes on grain, breeds in the rents of rocks and ledges of caves, and lays half-a-dozen eggs, of a bluish-green, spotted with brown. Shakspeare alludes to this species in his fine description of Dover Cliff:—

“The Crows and Choughs that wing the midway air
Show scarce so gross as beetles.”

STURNUS.

Gen. Char. Beak flattened, nearly straight, pointed, the base dividing the plumage of the forehead; wings rather long and pointed; tail short, somewhat forked.

STURNUS VULGARIS. *The Starling.* Length eight inches and a half. Beak yellow; general plumage black, glossed with brilliant purple and green reflections; wings and tail dull black, the feathers edged with reddish-brown; the feathers of the breast long and pointed; those of the shoulders tipped with buff-yellow. In winter the buff tips of the feathers are much more numerous, giving a more speckled appearance.

Though belonging to a different family, the Starling displays considerable affinity to the Crows, both in its anatomy and in its habits. It is extremely lively and intelligent; and in captivity becomes wonderfully familiar, and almost as sagacious as a dog. It learns to pronounce words with ease and precision. In a wild state it builds in holes of towers, cliffs, and hollow trees, caves of houses, and similar positions; after the breeding season is over, the Starlings of a given neighbourhood assemble in the evenings, and roost together in hundreds of thousands, on the reeds of a morass, or the shrubs of some plantation, which they have selected, and which they frequent year after year.

CHAPTER III.

MARCH.

THE progress of the season though slow is sure; and though the keen and blustering gales, and biting night-frosts that frequently mark this month, show that winter does not resign his sway without a struggle, and sometimes makes our impatience almost ready to complain that the old frosty king has not budged an inch from his position, the third month of the year never passes away, without our becoming pleasingly conscious that the laughing spring has effectually routed her predecessor, and that her gentle reign has actually begun.

The woods are still leafless, and the equinoctial gales whistle shrilly through the naked twigs; but many of the trees are lengthening and bursting their leaf-buds, and

some of those whose flowers appear before their leaves, as the elm, show their tall summits crowned with unpretending blossoms. The hedgerows, so beautiful a feature in a British landscape, mapping out the country like the beds of a garden, are assuming a flush of yellow-green; for the hawthorn, of which they are so largely composed, is among the first to open its close-set tufts of young and tender leaves; while the meadows which they enclose have put on a livelier verdure, grateful to the eye, and smile all the more gaily for the golden hue imparted by the lowly dandelions, which now in thousands open their starry disks to the noon-day sun.

The smell of the fresh up-turned earth meets us in the fields, for the ploughman is now busy at his work, whistling merrily as he trudges along in the early morning air, or occasionally stops to listen to the still earlier lark over his head: and the sower quickly follows him, casting the precious seed into the ground, the hope of the future harvest.

"Around pools and mill-ponds some few Swallows are usually seen before the month closes. The various tribes of flies awake and come forth; the yellow butterfly, in particular, amuses the naturalist; while, warmed by the

prevailing sun, the reptiles forsake their winter retreats. The same increasing warmth that calls our summer tribes into life, warns the winter birds to retire. The Woodcocks, which usually visit us in a spring flight, now pair and withdraw. The Fieldfares cluster on trees, and essay to sing before they take their departure; while our home-bred flocking birds, the Larks, the Chaffinches, the Yellowammer, and the Linnets, begin to separate and dissolve their winter associations. Towards the end of this month, the orchards and meadows glow with the golden blossoms of the *Ficaria verna*, the pilewort or lesser celandine; the whole face of the ground seems to be covered with this plant; yet in a few weeks it is gone, leaves and all, to make room for the succeeding tribes; so that no vestiges remain.”*

But earlier still than the changes noticed in the above extract, there appears in the woods of our southern counties, one of those peculiar birds of summer, the migratory Warblers. It is the pretty and diminutive Chiff-chaff, which usually comes to tell us of summer’s approach, before yet the blustering March has half fulfilled his course. It is of this little bird, (though he has confounded two species

* Gilbert White.

closely alike,) that Mr. Knapp thus pleasantly speaks :—“ I always hear with delight the earliest chirpings of that pretty harbinger of spring, the Willow-wren, trilling its wild and gleeful ‘ chiss-chaffs,’ as it chases the insects round the branches of the old oak in the copse, or on the yellow catkins of the sallow, itself almost like a coloured catkin too. But this elegant little bird is noticed only by the lovers and frequenters of the country; it animates the woods by its constant activity; the frequent repetition of its most cheerful modulation contributes essentially to the pleasing harmony of the grove; and its voice is most sprightly and frequent, when the morning is illumined with one of those mild, walk-enticing gleams, that render this short season the most delightful of our year. It builds its nest and rears its young with us; visits our gardens, but is no plunderer there, living almost entirely upon insect food; and its whole life is passed in harmlessness and innocence. As it is the earliest that arrives, so it is the last, I believe, of our feathered choir that leaves us, except a few lingering irresolute Swallows; and we hear it piping its final autumnal farewell even in October at times, and sporting with hilarity and joy, when all its congeners are departed.”

The subject of the annual migration of birds is one of

exceeding interest: when we look at our delicate little Warblers (*Sylviadæ*), flitting from hedge to hedge, on feeble wing, the character of their flight seems peculiarly unfitted to bear them over large districts of continent, and intervening tracts of ocean. Yet we certainly know that the northern and western regions of Africa are, in winter, the residence of those little birds of passage which in summer spread themselves over Europe, even to its northern countries. The motives which enforce a habit so surprising are but little understood; abundance of insect-food, on which these species subsist, might be found in the tropics in July, as well as in January; but as the production of the young appears to be the immediate object of the vernal migration, it is possible that some particular sorts of food, needful for the offspring, and proper only to certain climates, may be one inducement for the removal. The increasing temperature is perhaps another. It has been abundantly proved by experiments, that individual birds not only return to the same country year after year, but even to the very same limited spots where they have lived before.

But we will leave for the present the hazel coppice and its little musical tenants, and the labours of the peasant,

and the furrowed field, and the flowery meadows, and the budding hedgerow, and seek some barren mountain-top in the Scottish Highlands. The dark, broad sides of "the everlasting hills" rear themselves up everywhere around us, their feet bathed in the tranquil waters of their winding lochs, and their many-shaped peaks pierceing the sky, or shrouded in a veil of half-transparent mist. The air is sharp and bracing, and produces with the scenery an exhilaration of spirits, which makes us feel almost as if we could bound up the mountain-side as swiftly as the roe, or mount into the free air like a bird. The purple and brown heather beneath our feet, has a springy elasticity as we tread upon it, that aids the illusion, and upwards we mount with a cheerful contempt of difficulty. But the distance of the summit from the base has greatly deceived us; we walk upward and upward, and yet the peak seems scarcely any nearer; the steepness, too, increases as we rise, and anon we get above the boundary of the soft heather, and our feet feel the roughness and hardness of the frowning rock, varied, indeed, with many-tinted lichens, and hidden here and there by patches of moss and alpine plants. The summit still seems to be in the sky above, but on looking round, we perceive that we have gained a great elevation;

many peaks are now below our level, and the eye can penetrate into multitudes of little secluded nooks, and chasms, and dells among them, and can discern many a *tarn*, or lofty mountain-lake, spread out, like little sheets of silver, in the recesses of the dark rocky points. The loch seems so immediately beneath our feet, that a pebble let fall would drop into its glassy waters, and others there are, more distant, which we catch sight of as we ascend, all studded over with little islets, some green and fair, others mere barren rocks. The snow lies in masses in the hollows around us, becoming more and more visible as we ascend.

The unbroken silence that broods over these dreary mountain-peaks is deep and almost oppressive: none of the thousand blended and undistinguished sounds that are never truly still in the lower regions, reach this elevation. Yet it is not a silence absolutely unbroken either; for now and then a short barking note breaks upon the ear, as if borne from a distance; it is the cry of the bird we have come hither to seek—the grandest and noblest of the feathered tribes—the Golden Eagle; and now we see him as he sweeps round an angle of yonder precipice, and sails along majestically above our heads. We will endeavour to discover his

eyry : for it is at this season that the magnifieent birds, paired for life, betake themselves to their nests.

We have gained a loftier position ; and now, eautiously creeping to the edge of a rugged preeipiee, and looking over, we see, but utterly beyond our reach, the large and rude nest of the Eagle, placeed ou a projecting shelf or ledge that juts out from the face of the roek. It is eomposed of large stieks, and dead branchees of trees, with bunches of heather, and roots intermingled ; and on it lie, even at this early season, two large eggs. The female of the pair, whieh alone inhabit this mountain, is sailing along over yonder valley ; and now she has joined her mate, distinguishable at once from him by her superior size, and expanse of wing. They are leisurely coursing along, intent on the heath-elad valleys beneath them ; suddenly the female arrests her flight, poises herself a moment, then elosing her wings deseends with a rushing swoop, and presently mounts again bearing in her powerful talons some unfortunate hare ; and now they seek their lofty home to eat the prey, and we will leave them in the solitude of their wild fastnesses, and return to our descriptive labours, whieh for this month shall embrase the family *Falconideæ*, in which is eontained the noble bird whieh we have been just visiting in his mountain home.

AQUILA.

Gen. Char. Beak rather long, strong, curved from the cere to the point, hooked and pointed ; the edge of the upper mandible indistinctly notched ; nostrils oval, transverse ; wings long ; legs and feet strong, feathered to the toes.

AQUILA CHRYSÆTOS. *The Golden Eagle.* (Plate V.) Length about three feet. Beak bluish, the cere yellow ; general plumage rich umber-brown, that of the back of the head and neck having a golden lustre ; feet yellow.

To some of the habits of this noble species, the largest bird of prey found in the British Islands, we have already alluded ; it is rarely seen in the southern or midland districts of England, but in Wales, in the mountains of Derbyshire, of Westmoreland and Cumberland, and on the Scottish border, it is still found, and in the north of Scotland it is numerous. Its depredations on the young lambs, however, cause a price to be set on its head, and many are destroyed every season, so that it constantly becomes more scarce.

AQUILA ALBICILLA. *The White-tailed Eagle.* Length about two feet and a half. The beak, cere, and feet are

yellow; the head and neck, pale ashy-brown; the tail pure white; the rest of the plumage deep brown, somewhat purplish on the quills.

This fine bird is more common than the Golden Eagle, particularly on the precipitous parts of the sea-coast. It is more indiscriminate in its feeding, relishing fishes and seals, as well as land animals, preying on the former from its cliffy eminences. It builds its coarse platform-nest on the ledges of the lofty seaward rocks, or sometimes on the strong limbs of some aged tree that grows from their crevices. It is sometimes called the Sea-Eagle.

PANDION.

Gen. Char. Beak short, strong; the tooth slight and obtuse; nostrils oblong, oblique; wings long; legs strong and stout; toes free, nearly equal in length, the outer versatile; their under surface armed with hard points; claws much curved, long and sharp.

PANDION HALIAETOS. The Osprey. Length about twenty-two inches; beak black; cere and feet blue; eyes yellow; crown, hind-head, and nape whitish, streaked with brown; the feathers lengthened; upper parts dark umber-brown,

blackish at the tip of the wings ; the tail banded with darker brown ; whole under-parts white, except a band of brown across the breast.

The Osprey preys exclusively on fishes, on which it swoops as they play near the surface of the sea, seizing them with its sharp and powerful talons and bearing them aloft into the air. It builds a large nest of coarse materials, on a high tree, or on the rocks, or old ruined buildings ; sometimes many pairs associating to place their nests in the neighbourhood of each other. It is not uncommon, especially in rocky districts.

FALCO.

Gen. Char. Beak short, curving from its base ; a well-marked, strong tooth projecting from the edge of the upper mandible, which fits into a notch in the lower ; nostrils round ; wings long and pointed.

FALCO PEREGRINUS. *The Peregrine Falcon.* (Plate V.) Length about eighteen inches ; the beak blue ; cere, eyelids, legs and feet yellow ; crown, nape, and a spot below the eye blackish ; upper parts bluish-grey, lighter in old birds, the feathers indistinctly barred with darker ; wing-

quills dark brown, with paler edges; throat and breast white, with black streaks; breast and belly white, tinged on the former with red, marked with transverse bars of deep brown. Age produces much change in the markings of this and other species of *Falconidæ*.

This is the species which was formerly the most highly valued for the sport of hawking, in the technical language of which the female alone was distinguished as the Falcon, the male as the Tiercel. It is found almost all over the world; it is, however, more numerous in Scotland than in England, building on high rocks on the coast.

FALCO ALBICOLLIS. *The Merlin.* (Plate V.) Length about ten or twelve inches. The beak is bluish; the cere, the legs and feet yellow; most of the upper parts are dark-grey, each feather having a black shaft; a collar of pale orange-brown round the neck; the tail barred with blackish, and tipped with white; the quills of the wings deep black; chin and throat white; under parts rust-red, with dark-brown centres to the feathers. The female is dark liver-brown, where the male is grey.

This is the smallest of our Falcons, and though not larger than a Blackbird, is a bird of great power and courage. It was formerly in great request in hawking, and was a

particular favourite with the ladies, possessing much docility and affection.

“A Merlin small she held upon her hande
With hood and jessie gallantly bedyght ;
But little did he neede or hoode or bande,
Could he but gaze on her, full safe were he from flyghte.”

SPENSER.

FALCO TINNUNCULUS. *The Kestrel.* Length about fifteen inches; beak blue; cere, legs and feet yellow; top and back of head and neck ashy-grey, with dark streaks; the back, wing-coverts, and tertials pale-red, sometimes inclining to pink, each feather tipped with black; the quill-feathers of the wings brownish-black; the tail and its coverts bluish-grey, the former terminating in a black band, with a white edge; under parts pale-red, marked on the breast and belly with dark streaks; on the sides and lower belly, with spots. The female is more barred on the upper parts than the male.

This beautiful species is the most common of all our *Falconidæ*; its motions are graceful, and its habit of hovering in the air has procured it the name Windhover. It feeds chiefly on mice, but occasionally on insects and worms, rarely on birds. It breeds in March on trees.

ACCIPITER.

Gen. Char. Beak short, compressed; tooth distinct but rounded; wings short; legs long and slender, covered with smooth scales; middle toe very long; claws sharp and hooked.

ACCIPITER NISUS. *The Sparrow-hawk.* Length twelve to fifteen inches; beak blue; cere, eyes, legs and feet yellow; upper parts blackish-brown, greyish in old birds; tail with three bands of grey, and a white tip; whole under parts rust-red, with bars of brown. The female has the under parts greyish-white, and is sometimes spotted with white on the upper.

In wooded districts the Sparrow-hawk is a common and well-known species, pursuing with boldness and success small birds and quadrupeds; in the breeding season the female, which is much superior to the male in power and daring, will even swoop upon a chicken in the farm-yard, or a pigeon in the dove-cote, and bear it off to her young. The nest is always built in one of the trees in a wood.

MILVUS.

Gen. Char. Beak curving from the cere, edges slightly festooned; nostrils oblique; wings long; tail long and forked; legs and feet short.

MILVUS VULGARIS. *The Kite.* Length twenty-six inches. The beak horn-coloured; cere, eyes, legs and feet yellow; head, neck, and throat ashy-white, streaked with darker; general plumage of the upper and under parts rust-red, each feather with a dark-brown centre; the wing-quills nearly black.

The graceful flight of the Kite or Glead, as it sails in wide circles on motionless wings, with broad expanded tail, is often admired. It was formerly much more common than now, yet still it is often seen among woodland scenery. Its prey is taken on the ground, and consists of birds, small quadrupeds, reptiles, and even fishes from rivers and ponds.

BUTEO.

Gen. Char. Beak small and feeble, curved from the base, festoon of the edge scarcely perceptible; cere very large; nostrils pear-shaped; wings long and ample; legs and feet short and strong.

BUTEO VULGARIS. *The Common Buzzard.* Length twenty-two inches. The beak blackish; cere, eyes, and feet yellow; upper parts brown, varying in the tint, each feather with darker centre; the tail barred with paler brown; wing-quills nearly black; under parts whitish, spotted and streaked with brown.

The Buzzard is not uncommon in the woods and forests of this country, making its nests in the forked branches of a great tree; its courage and activity are not equal to its size, for it is both sluggish and cowardly; it pounces upon its prey on the ground.

CIRCUS.

Gen. Char. Beak small and feeble, slender, compressed, curved from the base; festoon scarcely perceptible; nostrils oval; lores covered with radiating hairs; face surrounded with a sort of ruff, resembling that of the Owls; ears large; wings and tail long; legs and feet long and slender; claws weak and slightly curved.

CIRCUS AERUGINOSUS. *The Marsh Harrier.* Length about twenty-two inches. The cere, eyes, and feet yellow; beak and claws black; the head and neck white, tinged with rusty, and streaked with brown; back, wing-coverts,

and tertials deep umber-brown : the wing-quills blackish, the secondaries and tail grey ; under parts rusty-brown, streaked with darker. The plumage varies much with age.

This species frequents low and marshy tracts, flying along at a short distance above the earth, quartering the ground for prey very regularly. The nest is built on the ground, concealed by a tuft of grass or a bush, and is composed of sticks, rushes, and the like ; here are deposited three or four white eggs.

CIRCUS CYANEUS. *The Hen Harrier.* Length eighteen to twenty inches. The cere greenish ; legs and feet yellow ; beak and claws black. The whole plumage of the male bluish-grey, becoming almost white on the under parts, and very dark on the wing-quills. The female, sometimes called the Ringtail, differs greatly from the other sex, her whole upper parts being umber-brown, some of the feathers having reddish tips, and the under parts reddish-yellow, with darker centres to the feathers ; the edges of the face-ruff are pale.

The manners of this species much resemble those of the preceding ; it feeds on small animals indiscriminately ; lizards are much devoured by it ; from its frequent depredations in the poultry-yard it has derived its name of *Hen Harrier*. Its habit is to examine the ground over which it is hunting,

very carefully, flying low, and skimming the surface of the herbage, often returning, day after day, to the same field at about the same hour, crossing over it in various directions with great regularity. It has boldness and strength enough to make a prey of a Partridge, a Red Grouse, or even a Pheasant; though mice and other small mammalia probably constitute the chief portion of its subsistence.

Several other species of *Falconidæ* are marked as British, besides those we have described; but they must be considered rather as rare and accidental visitors to this country, than as denizens of it, and therefore do not fall within the range we have prescribed to ourselves.

CHAPTER IV.

APRIL.

THERE is scarcely any circumstance connected with the history of a bird more interesting than the construction of its nest. So evident a contrivance for a certain end, so admirably adapted for this intended purpose, so neatly and beautifully constructed of materials often apparently uncouth and unwieldy, so artfully and ingeniously concealed from observation or protected from danger are the nests of most birds, yet so exceedingly varied are those of different species, in their form, materials, contrivances, and situations, that a bird's nest has always been regarded as a very surprising exhibition of instinctive intelligence and skill.

It is in this month that the business of nest-building and incubation, the most important objects of a bird's

existencee, is most actively earried on. A few species, as we have already seen, commence in earlier months, and a few more delay it till the season is even farther advanceed, as the Flycatcher and the Nightjar, for example ; but from the beginning to the middle of April, the great body of our vernal visitants arrive from their winter-quarters within the tropies, especially the immense family of *Sylviadæ*, or Warblers, and the *Hirundinidæ*, or Swallows, and immediately begin their domestic economy ; in which they are joined by a whole host of speeies, that had spent their winter with us, but now feel the genial operation of the spring, inviting them to eonjugal and parental relations :—

“ Some to the holly-hedge
Nestling repair, and to the thicket some;
Some to the rude protection of the thorn
Commit their feeble offspring. The cleft tree
Offers its kind concealment to a few,
Their food its insects, and its moss their nests.
Others apart, far in the grassy dale
Or rougheniug waste, their humble texture weave.
But most in woodland solitudes delight,
In unfrequented glooms, or shaggy banks,
Steep, and divided by a babbling brook,
Whose murmurs soothe them all the livelong day,
When by kind duty fixed. Among the roots

Of hazel, pendant o'er the plaintive stream,
They frame the first foundations of their domes ;
Dry sprigs of trees, in artful fabrie laid,
And bound with clay together. Now 'tis nought
But restless hurry through the busy air,
Beat by unnumber'd wings. The Swallow sweeps
The slimy pool, to build his hanging house
Intent. And often, from the careless baek
Of herds and floeks, a thousand tugging bills
Pluck hair and wool, and oft, when unobserved,
Steal from the barn a straw ; till soft and warm,
Clean and complete, their habitation grows."—THOMSON.

We are sure that all the ordinances of God in creation are the results of perfect and infinite wisdom, and though our limited intelligence often finds itself baffled in its attempts to discern the causes of things, this is no more than should be expected when the finite endeavours to deal with the infinite, and should lead to a humble adoration, rather than to a proud and self-sufficient arraigning of the fitness of existing things. The diversity in the forms and materials, the position, the degree of comfort, the exposure or concealment, presented by the nests of birds which apparently disagree very slightly in their habits and requirements, is one of those facts at which we wonder, but which we cannot explain. We cannot tell why one bird must prepare for its

family an arched dome, almost as tight as an oven or a bottle, constructed of felted moss, and stuffed with soft feathers; while another, apparently no less tender and frail, is content with a shallow cup, whose thin walls consist of a few blades of dried grass, or slender twigs. "The Golden-crested Wren, a minute creature, perfectly unmindful of any severity of our winters, and which hatches its young in June, the warmer portion of our year, yet builds its most beautiful nest with the utmost attention to warmth; and interweaving small branches of moss with the web of the spider, forms a closely-compacted texture nearly an inch in thickness, lining it with such a profusion of feathers, that, sinking deep into this downy accumulation, it seems almost lost itself when sitting; and the young, when hatched, appear stifled with the warmth of their bedding, and the heat of their apartment; while the Whitethroat, the Blaekape, and others, which will hatch their young nearly at the same period, or in July, will require nothing of the kind. A few loose bents and goose-grass, rudely entwined, with perhaps the luxury of some scattered hairs, are perfectly sufficient for all the wants of these; yet they are birds that live only in genial temperatures, feel nothing of the icy gales that are natural to our pretty indigenous artists,

but flit from sun to sun, and we might suppose would require much warmth in our climate during the season of incubation; but it is not so."*

What a contrast is there between the nest of the Ring-dove and that of the Magpie! The former chooses the fork of a horizontal branch, often of an oak or a pine, with no shelter or protection above, and little or no foliage around. On this she places, rudely enough, a loose platform of dry twigs, without the slightest hollow, but laid flat across one another without any attempt at interweaving; and so small a quantity is brought together, that the eggs may frequently be discerned by the eye beneath, through the slight and loose accumulation. And this is the general habit of the *Columbidae*. On the other hand, the Magpie, provident against depredation, if not against discovery, carefully selects the centre of some thick and thorny bush, or a tree so well fenced round with branches as to make approach difficult. The nest is a large dome, formed indeed of thorny twigs, but so interlaced and accumulated as to prevent any access to the eggs, except through the small hole in the side through which the parent bird enters. Sometimes, when the situation seems not sufficiently strong

* Journal of a Naturalist, p. 168.

by nature, the bush is barricaded and encircled with briars and thorns in the most formidable manner, so rough, so strong, and so firmly entwined with the living branches, that even man himself, without an axe or bill, would find it a matter of pain and difficulty to get at the nest. But inside this strong fortress, which is rough for protection, a snug chamber is constructed of well-wrought clay smoothly plastered, and again lined with a warm drapery of fine fibres and dry blades of grass.

It may be interesting to advert to one or two other forms of nests constructed by British birds; though far more curious and more varied illustrations might be drawn from the architecture of those species which inhabit foreign, and especially tropical, countries. The hemispherical cups of mud, formed by the common House Martin in the corners of windows and under the eaves and ledges of houses, are well known to every one. Soft mud from the edges of pools, or ruts in the high road, is collected by the bird in little pellets, carried in her mouth to the selected spot, and there plastered against the wall, pellet after pellet, until the lowest layer is formed. As each is deposited, the tenacity of the material is increased by an admixture with glutinous saliva secreted by the bird, and minute bits of

broken straw help to render it more compact. Lest the weight of the work, while it is yet soft, should pull it down, the little architect does not work too fast; but making only a shallow layer every morning, she devotes the rest of the day to amusement; thus the work progressively hardens. She works by clinging to the irregularities of the wall with her strong feet in a perpendicular position, the tail strongly thrown in and serving as an additional support; and as she lays on each pellet of mud, she plasters it about with her chin, moving her head rapidly from side to side. Thus, in the course of ten days or a fortnight, a snug and tight chamber is constructed, with a small hole near the upper part, and being lined with grass and feathers, is admirably adapted for the reception and rearing of the young brood.

The nest of the Golden Oriole, rarely found in England, is said to be in shape like a purse, or a basket with two handles, by which it is hung with great art from two parallel twigs, or the fork of a branch. The materials used for it are chiefly long grass and wool, so curiously interwoven as mutually to confine and sustain each other.

The Chaffinch and the Goldfinch are remarkable among our birds for the extreme neatness and beauty of the nests which they construct. The substances they use are chiefly

moss and wool, the whole compacted together by the peculiar process called *felting*; by which the texture is rendered almost as close and smooth as that of a piece of cloth. That of the Goldfinch is the most smooth and uniform, not a single fibre of the moss being allowed to project from the outline; but that of the Chaffinch is tastefully ornamented on the outer surface, by the addition of minute paper-like lichens, of a delicate green or silvery-grey hue, stuck on and fastened with spiders' webs.

But the most remarkable specimen of domestic architecture produced by any of our native birds, is the nest of the Long-tailed Tit. In form it is much like a bottle with a short neck, composed of green mosses carefully felted together with wool, so as to be firmly compacted; the outside "sparkles with silver-coloured lichens," scattered over the surface, and intermingled "with the egg-nests of spiders, from the size of a pea and upwards, parts of which are drawn out to assist in felting; so that when the texture of the nest is stretched, portions of fine gossamer-like threads appear among the fibres of the wool." The interior is filled with a profusion of soft feathers, among which twelve or fifteen little Tits are sometimes brought into the world.

We shall occupy the remainder of this month by a de-

scription of the British Warblers, constituting the Family
Sylviadæ.

ACCENTOR.

Gen. Char. Beak strong, depressed at the base, conical pointed; wings with the first quill very short, the third longest; legs and feet strong.

ACCENTOR MODULARIS. *The Hedge Sparrow.* Length five inches and a half. Head and neck grey, streaked with brown; back and wings reddish brown, streaked with darker; wing-quills and tail plain dusky brown; tertials with rusty edges; chin and throat grey, tinged on the lower parts with yellowish-brown, and mottled on the sides.

This is the most frequently chosen of all the little birds, that act as foster-parents to the Cuckoo. It resides the whole year with us; is very common; builds early in March, being one of the first of our nest-builders; and feeds on insects, worms, and seeds.

ERYTHACA.

Gen. Char. Beak broad, depressed at base, narrowing and slightly compressed to the point; gape set with weak bristles; wing rounded, first quill rather short, fourth longest; legs long, feet and claws formed for walking, rather than perching.

ERYTHACA RUBECULA. *The Robin.* (Plate V.) Length five inches and three-quarters; whole upper parts yellowish olive-brown; tertials and wing-coverts tipped with pale orange; face, throat, and breast, reddish-yellow, separated from the olive by an edge of grey; the lower parts yellowish white.

The gay bosom and bright black eyes of the Robin, no less than the vivacity of his motions, his sweet song, continued all through the year, and his confiding familiarity with man, have rendered him a universal favourite. The male and female are tenderly attached to each other, and are believed to remain united for life. With other birds, however, the Robin manifests a tyrannical and quarrelsome disposition. It feeds on worms, insects, spiders, fruits, and berries, builds in a hole of an ivy-covered wall or in a thick bush, and lays five or six eggs, spotted with pale reddish on a white ground.

PHœNICURA.

Gen. Char. Beak slender, straight, depressed at the base, compressed to the point, which is bent downward. Wing rounded, fourth quill longest; tail more or less red; legs and feet long and slender.

- 1 Nightingale
- 2 Redbreast
- 3 Redstart
- 4 Wheatear



PHœNICURA RUTICILLA. *The Redstart.* (Plate V.)
Length five inches and a quarter. The forehead white, becoming grey on the crown, which is the hue of the back and wings; quills brown; rump and tail bright rust-red; the middle feathers of the tail streaked with brown; chin, throat, face, and sides of the neck deep black; under parts pale red.

This elegantly coloured bird arrives from its winter quarters in the tropics, early in April, and spreads over this country, but not in great numbers. In many of its manners it resembles the Robin. It frequently takes insects on the wing, like the Flycatchers. Its song, which is soft and pleasing, is occasionally poured forth during flight, as well as on the twig of a bush. In captivity it readily learns to whistle musical airs, and imitate the songs of other birds.

SAXICOLA.

Gen. Char. Beak straight, broad at the base, advancing on the forehead, bent downwards at the tip, which is slightly notched; the gape set with a few stiff hairs; legs long; lateral toes not quite equal; claws weak.

SAXICOLA RUBICOLA. *The Stonechat.* Length five inches and a quarter. The whole head and neck, and upper parts

generally, black; the wings inclining to a browner shade, with a band of white on the shoulder; the tail-coverts white; breast orange-red, separated by a band of white on each side from the back of the neck; lower parts paler, becoming almost white. The female, and the male in winter, have the black of the upper parts mottled with rusty-brown.

Though migratory upon the continent, the Stonechat is a permanent resident with us, and may frequently be seen, perched on the summit of a large stone, darting after flies, and returning to the same station. Open commons and barren spots are its favourite localities.

SAXICOLA RUBETRA. *The Whinchat.* Length scarcely five inches; crown, neck, cheeks, back, and wings, deep brown, the feathers tipped with pale brown; a streak of white passes from the beak over each eye and ear, and descends upon the neck; the tail is deep brown; all the feathers, except the middle pair, white at the base, with black shafts; chin, and a band passing obliquely on each side of the throat and breast, fawn-colour, becoming pale buff on the under parts; the winglet is white in the male.

The manners of this species greatly resemble those of

the Stonechat; but it is migratory, and it manifests a special partiality to furze. The food of both consists of worms, slugs, and berries, as well as insects captured in the air.

SAXICOLA *ŒNANTHE*. *The Wheatear.* (Plate V.) Length six inches and a half. Upper parts delicate pale grey; a band of black passes from the beak, surrounding the eye, and spreads over the ear-coverts; this band is separated from the grey by an edging of white; rump and tail-coverts pure white; wings and tail black, but all the feathers of the latter, except the middle pair, have their basal part white; chin and throat buff; under parts pure white. The female, and in winter the male, have the grey clouded and almost displaced by brown, which mingles also with the black of the wings.

The Wheatear is one of the first to make its annual spring migration to this country, frequently arriving early in March. It frequents the coast, open downs, and stony commons; and is caught in tens of thousands, in simple turf traps, by the shepherds, being in much request for the table, on the Sussex coast.

SALICARIA.

Gen. Char. Beak straight, awl-shaped, with the top forming a ridge; broad at the base, very slightly bent at the point; forehead narrow and flattened; wings short, first quill minute, second and third longest; tail long, rounded; legs long; feet large and strong.

SALICARIA LOCUSTELLA. *The Grasshopper Warbler.* Length five inches and a half. Whole upper parts olive-brown; the edges of the feathers pale; under parts pale olive, nearly white on the central line of the belly, the throat speckled with brown; the under tail-coverts shafted with brown.

This little bird, whose grasshopper-like *crink* is more often heard, than itself is seen, arrives about the middle of April. It is very shy, skulking along at the bottom of hedges and in ditches, more like a mouse than a bird. Its nest is artfully concealed, and contains five or six beautiful white eggs, marked with red specks.

SALICARIA PHRAGMITIS. *The Sedge Warbler.* Length four inches and three-quarters; whole upper parts yellowish-brown; the wings and tail dusky-brown; under parts pale-

brown, becoming almost white on the throat, and darker below; a pale streak over the eye.

This pretty bird is also migratory: it frequents reedy ponds and rivers and osier-beds, where it pours forth its shrill and babbling song almost incessantly, by night as well as by day. Its nest is built among the rushes, so that several of the stems are included in its sides.

SALICARIA ARUNDINACEA. *The Reed Warbler.* Length five inches and a half. The upper parts are of a greenish or yellowish-brown, rather the latter on the rump; the under parts are pale buff, fading into white on the throat and chin; a pale yellow streak passes from the beak over each eye. The habits of the present bird are much like those of the preceding, singing in the same situations, and with the same pertinacity. Its nest is still more singularly constructed, for it is suspended between several stalks of water-plants. Mr. Yarrell has figured and described a beautiful specimen, supported between four reeds, which are enclosed in the weaving of the margin; it forms a cup or purse much deeper than wide. Four or five eggs are laid, of a greenish tinge, speckled with a darker hue; the depth of the nest provides against the danger of the eggs being thrown out in the waving of the reeds.

PHILOMELA.

Gen. Char. Beak straight, upper edge rounded, tip very slightly bent, and notched; wings with first quill short, third longest; legs and feet long and slender.

PHILOMELA LUSCINIA. *The Nightingale.* (Plate V.) Length six inches. Whole upper parts reddish-brown, more ruddy on the rump and tail; under parts greyish-white; tinged with reddish on the under tail-coverts.

This bird, the most renowned of all for song, arrives from the south in April, the males coming ten days or a fortnight before their mates. Woods of low, close growth, plantations and hedges, and (around London) market-gardens and orchards, are the favourite resorts of this fine songster. The nest is formed in a hollow of the ground; the young are fed with small caterpillars. The Nightingale does not extend to the northern nor to the western parts of our country.

CURRUCA.

Gen. Char. Beak rather stout and short, depressed at the base, slightly curved at the point, and notched; a few weak bristles at the gape; legs not long, feet short, with the sole widened.

CURRUCA ATRICAPILLA. *The Blackcap.* Length five inches and three-quarters; upper part of the head deep black; neck ash-grey; the remaining upper parts brownish-grey, approaching to olive; under parts pale grey, becoming white below. The female has the crown of a yellowish chestnut hue, and the under parts are tinged with the same colour.

The Blackcap is found during summer all over Great Britain, frequenting the same situations as the Nightingale, which it nearly approaches in the excellence of its song.

CURRUCA HORTENSIS. *The Garden Warbler.* Length five inches. Whole upper parts dark yellowish-brown; wings and tail deepest; a streak over the eye rather paler; under parts dull white, tinged with brown.

"Of all the inhabitants of our woods," says Buffon, "the Fauvettes, (which is the name given to this Warbler in France,) are the most numerous and agreeable. Lively and nimble, always in motion, they seem occupied only with play and pleasure; as their accents express only joy, it is a pretty sight to watch them sporting, pursuing, and enticing each other; their attacks are gentle, and their combats end with a song." It is sometimes called with us, the Greater Pettychaps.

CURRUCA CINEREA. *The White-throat.* (Plate VI.) Length five inches and a half; head and neck greyish-brown; upper parts of the body yellowish-brown; wings and tail umber-brown, the tertials broadly edged with rust-red; the outer feather on each side of the tail has the outer web white; throat and under parts white, purest above, tinged with rosy on the breast and belly.

The *White-throat* is perhaps the most familiarly known of all our Warblers; it has not the shy, recluse habits of the former species, but frequents hedges and fields, and is not uncommon in gardens. It feeds largely on caterpillars, and hence is a useful as well as pleasing visitor. Its manners are sprightly and entertaining, and its simple song, if not distinguished for power or variety, is yet agreeable. It is readily taken in a trap, baited with a living insect.

CURRUCA SYLVIELLA. *The Lesser White-throat.* Length five inches and a quarter. Upper part dull grey, tinged on the middle of the back with yellowish-brown; wings and tail blackish; the outer feathers of the latter white at the edges and tips; the tertials edged with pale-brown; under parts pure white, slightly flushed with pink, particularly on the breast.

Though common in the southern counties, this bird

scarcely extends to the north of England; in manners, habits, and appearance, there is but little difference between this and the preceding species.

SYLVIA.

Gen. Char. Beak slender, conical, slightly dilated at the base, and compressed towards the tip; gape furnished with weak bristles; wings as before; tail somewhat forked; legs and feet long and slender; hind toe and claw strong.

SYLVIA SYLVICOLA. *The Wood Warbler.* (Plate VI.) Length about four inches; upper plumage olive-green; wings and tail greyish-brown with yellow edges, a streak of pure yellow over the eye; throat and breast delicate yellow, becoming white on the under parts.

The Wood Wren, as this bird is also called, arrives in April, and is to be found in tall woods and plantations, where it is readily identified by a tremulous shrill note, peculiar to itself, frequently accompanied by a shivering motion of the wings. It conceals its nest very artfully, among moss and leaves, at the foot of some bush.

SYLVIA TROCHILUS. *The Willow Warbler.* (Plate VI.) Length five inches; upper parts pale olive; a narrow pale streak surmounts the eye; wings and tail brown, edged with

olive; under parts whitish, tinged with yellow, most decidedly on the breast and throat; legs and feet pale-brown.

One of the earliest of the migrant Warblers, this little bird enlivens our groves and gardens with its loud and energetic song, and with its vivacious motions even in March. Its nest is an interesting structure, being a complete hollow ball, made of blades of grass, strips of bass, etc., interwoven, and lined with feathers; a small hole on one side admits the parent bird to her snug, self-built home. This is frequently placed in the strawberry beds of a garden; where the abode of the bird is desirable, as it eats only insects.

SYLVIA HIPPOLAIS. *The Chiff-Chaff.* Length about five inches; upper parts greyish-brown, less tinged with green than in the preceding; a streak above the eye hardly discernible; under parts pale yellow, blending in the brown above, on the neck; legs and feet deep blackish-brown.

The Chiff-chaff is so called from the resemblance which its double note, repeated with incessant vivacity, bears to those sounds; its well-known voice is heard frequently as early as the 12th of March, and is welcome as a harbinger of summer. Small caterpillars that roll up the young leaves

of our fruit-trees, form for some time the prineipal food of this little useful bird, which thus saves the future crop from many an insidious foe. The nest is of a similar structure to that last described, and is frequently placed in a furze-bush, or in the lower part of a hedge.

MELIZOPHILUS.

Gen. Char. Head large; beak slightly arching from the base; under mandible shutting within the upper; tail long, rounded, soft; legs and feet strong.

MELIZOPHILUS DARTFORDIENSIS. *The Dartford Warbler.* Length five inches; upper parts dull blaek; the wings and tail with brown edges; chin, throat, breast, and flanks reddish-brown, with white speeks on the chin; middle of belly white; legs pale-reddish.

On furze eommons, in the south of England, this bird remains the whole year; and in some places is rather common, while in others it seems unknown. It has been deseribed as skipping about by dozens on the summits of the furze, so that a rider looking over them sees the tops of the bushes quite alive with these birds. They feed on small insects, whieh they take on the wing. Their notes are feeble and shrill.

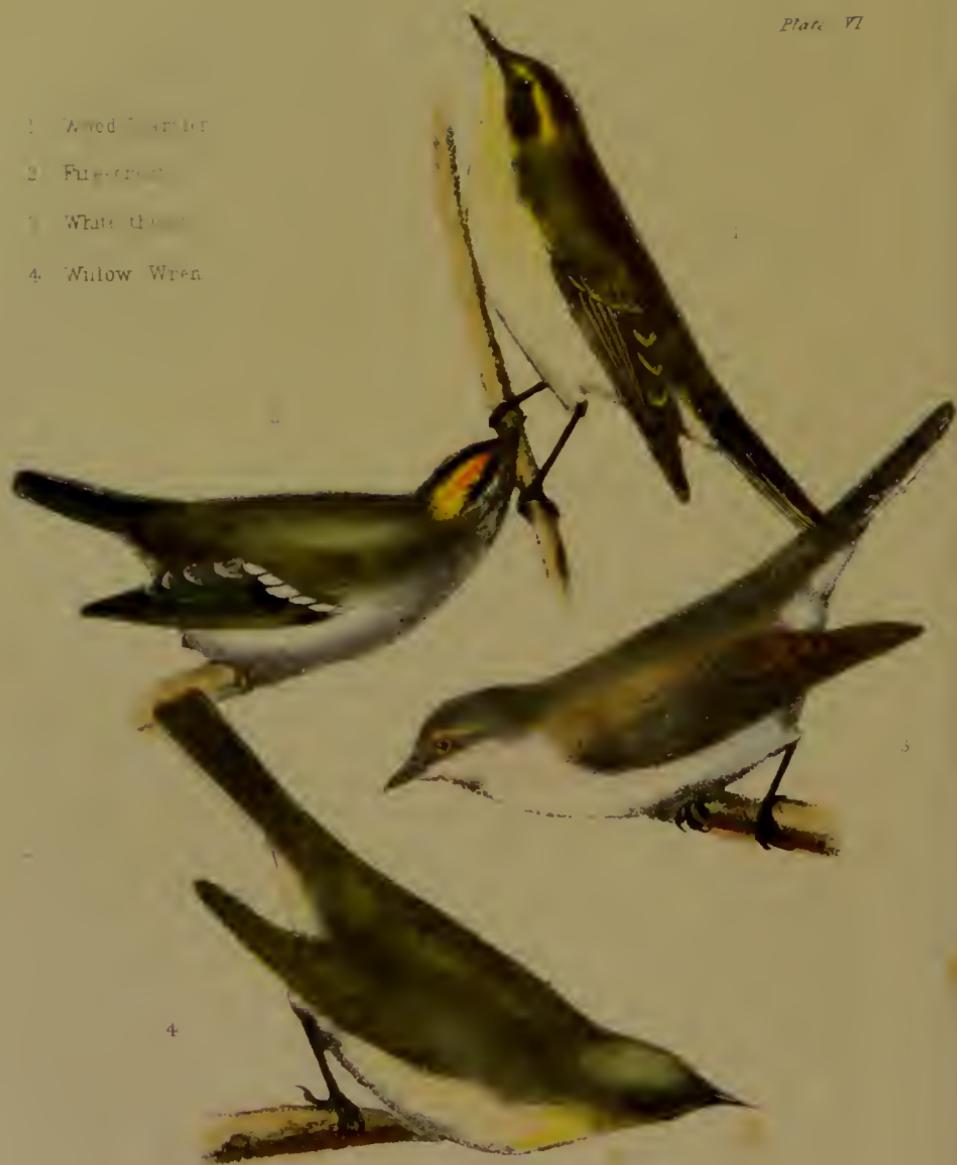
REGULUS.

Gen. Char. Beak straight, slender; nostrils generally with a single decomposed plumelet; tail somewhat forked, the tips of the feathers sharp; legs slender; feet strong.

REGULUS CRISTATUS. *The Gold-crest.* Length three inches and a half; upper parts yellowish-green; the crown of the head brilliant yellow, orange in the centre, bounded on each side by a narrow black border; this beautiful crest is partly erectile; wings dusky, with olive edges; the coverts have white tips, forming a bar across the wing; under parts yellowish-grey.

This is the smallest of British birds, and is a beautiful little creature indeed. It is a constant resident with us, bearing, in its unwearied activity, the hardest winters. It has much of the manner of the Tits, hanging, climbing, and tumbling in all directions, among the topmost twigs of the trees, especially in plantations of evergreens. Its song is soft and pleasing, though weak; and it is sometimes poured forth in the air, as the little bird hovers over a bush. The nest is a structure of extraordinary neatness and beauty; it is a purse-like cup, principally composed of moss, and sus-

1. "Waved" Warbler
2. Fuscous
3. White-throated
4. Willow Wren



pended between two twigs. As many as a dozen young are sometimes reared in this pretty cradle.

REGULUS IGNICAPILLUS. *The Fire-crest.* (Plate VI.) Length nearly four inches. General plumage scarcely distinguishable from that of the preceding, except by being of rather a yellower tint; but the crest is of the most brilliant fiery orange, and the black on each side is bounded by a line of white passing over each eye; there is also a black line passing through the eye from the beak, and another from the angle of the mouth.

It is thought to be rare in this country; but it may have been confounded with the Gold-crest.

PARUS.

Gen. Char. Beak strong, rather short, somewhat conical, sharp and hard; the notch almost lost; nostrils covered with bristles; wings short and rounded; legs and feet strong.

PARUS MAJOR. *The Great Tit.* Length five inches and a half. The head and throat deep black, with brilliant blue reflections; the ear-coverts and cheeks pure white, bounded by a black band from the throat to the back of the neck; the back and shoulders, and small coverts ashy-olive; the

rump merging into bluish-grey; wings and tail bluish-black, the coverts of the former broadly tipped, and the quills edged, with white; under parts lemon-yellow, paler beneath; but a black band passes down from the throat, along the medial line of the breast and belly.

The familiarity and business-like activity with which the Tits prosecute their search for minute insects in the crevices, and among the buds and twigs of trees, especially in our gardens, joined with their neat compact forms, and brightly contrasted colours, have made them well known and generally liked. Their disposition, however, is quarrelsome: and their strength, and the hardness and sharpness of their beak, enable them to be tyrannical among other small birds. Their notes are lively, but not very musical. The present is the largest species with us.

PARUS CÆRULEUS. *The Blue Tit.* (Plate VII.) Length four inches and a half. Crown of the head rich blue, bounded on each side by a band of white passing over each eye, and meeting on the forehead; a band of deep blue passes through the eye; the cheeks and ear-coverts white, bounded on all sides by a band of dark blue, which, descending from the chin upon the throat and breast, branches off on each side, and passes round the neck; back

and rump dull green, becoming lilac on the nape; wings and tail pale blue; the coverts and the tertials tipped with white; under parts sulphur-yellow.

The Blue Tit builds, like its fellows, in some hole, and deposits a great mass of soft materials; sometimes twelve, fourteen, or even eighteen eggs are laid; the young are fed with caterpillars.

PARUS ATER. *The Cole Tit.* Length four inches. Whole head and throat black, except a large patch of white on the ears and neck on each side, and a third on the hind head; upper parts bluish-grey, tinged with greenish on the rump, and with dusky on the quills and tail; both the greater and less coverts are tipped with white; under parts white, tinged on the belly and flanks with yellowish.

The Cole or Colemouse is one of the most abundant of our Tits, frequenting shrubberies, plantations, and gardens; often actively engaged with other species of the same genus in small parties, pursuing its search for minute insects; it feeds also on seeds of resinous trees, which it has the habit of hiding in holes against future need.

PARUS PALUSTRIS. *The Marsh Tit.* Length four inches and a half. The chin, head, and nape are deep black, without any patch of white; upper parts greenish-grey; whole

under parts dull-whitish, tinged with brown on the belly; no bars of white on the wings.

Rather an uncommon species, yet numerous enough in certain situations, as marshy lands covered with bushes, osier beds, etc. It makes a nest in some old low tree, as a pollard willow or ash, excavating a hole in the decaying wood with its little awl-like beak. In most of its instincts and habits it resembles its fellows.

PARUS CAUDATUS. *The Long-tailed Tit.* (Plate VII.) Length five inches and a half, of which the tail is nearly three. The head (the plumage of which is loose and soft) is white, with a broad patch of black rising above each eye and covering the ears, where it meets a half collar of the same hue that encircles the nape, and descends triangularly upon the back; the rest of the back rose-colour; wings black, the tertials edged with white; tail-coverts and tail black, except that the outermost three feathers on each side of the latter have their external webs white; the feathers diminish in length from the middle; whole under parts ashy-white, tinged with pink on the sides.

The Long-tailed Tit varies in some of its habits from the other species. It has less familiarity with man, remaining the whole year among thick woods. Its nest is a wonderful

structure; there is nothing else of the kind in Great Britain that can compare with it; it is an oval or bottle-shaped dome, firmly woven of moss and wool, ornamented with papery lichens, and almost filled with soft feathers; it is usually placed in a bush. In this little oven, twelve or fourteen young Long-tails are hatched: and, what is remarkable, the whole family flit and whisk about in company during the remainder of the year, roosting all in a bunch at night.

PARUS BIARMICUS. *The Bearded Tit.* Length six inches. Beak and eyes rich yellow; whole head and neck delicate pearl-grey; a patch of black on the cheeks descends on each side on a sort of hanging moustache, which can be elevated at will; upper parts pale umber, smaller wing-coverts black, quills greyish, with white edges; tertials umber, with a central black stripe, and the inner webs white; tail long, graduated, pale umber, with the three outer feathers on each side white on the outer webs; under parts white, tinged with red on the sides; under tail-coverts black.

This strikingly marked bird differs a little in form from the proper Tits; it frequents marshy places, where it feeds on small shelled mollusca, and water-insects. Its song,

though soft, is clear and ringing like the tones of a little silver bell.

MOTACILLA.

Gen. Char. Beak straight, slender, pointed, the base slightly dividing the plumage of the forehead ; wings long and pointed ; tertials lengthened ; tail long ; legs long ; feet formed for running.

MOTACILLA YARRELLII. *The Pied Wagtail.* (Plate VII.) Length upwards of seven inches, of which the tail is nearly half the whole. Upper parts black ; the wing-coverts edged and tipped with white ; the quills edged with white ; outmost two pairs of tail-feathers white ; the sides of the head pure white, meeting across the forehead, and descending in a point on each side ; throat and breast black ; under parts white. In winter the back becomes grey, and the white spreads over the chin and throat.

The lively active manners of the Wagtails are well known, and their clean, well-contrasted colours admirably set off their elegant form. They haunt either dry plains or the banks of water, chasing the insects that flit about such situations, now and then taking a short flight, and uttering

a sharp shrill note. This species builds in holes of walls, or on the ground.

MOTACILLA BOARULA. *The Grey Wagtail.* Length nearly eight inches; head, neck, and back blue-grey; a pale line curves over the eye, and another passes from the gape obliquely on each side of the throat; wings and tail blackish, some of the feathers having white edges; chin and throat black, descending in a point; under parts, with the rump and upper tail-coverts, lemon-yellow.

This elegant species is less common than the preceding, and is less constant as a resident; generally migrating towards the north of this island in spring, and returning to the southern parts on the approach of winter. It haunts water still more exclusively.

MOTACILLA FLAVA. *Ray's Wagtail.* (Plate VII.) Length six inches and a half. Upper parts yellowish-olive; wings more dusky, tipped and edged with whitish; tail blackish, except the external pair of feathers, which are white; whole under parts, as well as a streak over each eye, brilliant yellow.

This bird is only a summer visitor to us, arriving about the beginning of April, when it spreads itself over open and cultivated places. It builds on the ground a rather

slight nest of roots and dry slender grasses, lined with hair, where it lays four or five eggs. "I have seen," says an observer, "as many as seven of these birds, which I concluded were the parents and their offspring, running and dodging just before a cow's head, apparently catching small insects. I suppose that the cattle disturbed small flies, which are the favourite food of this bird, lodged in the grass, and which, as soon as they arose, were caught by the watchful Wagtail before they could secure their retreat into the grass. We thus see it demonstrated how one animal is subservient to the well-being of another."

ANTHUS.

Gen. Char. Beak straight, slender, compressed; wings not long, but pointed; the tertials much lengthened; legs long, hind toe and claw long.

ANTHUS ARBOREUS. *The Tree-pipit or Titlark.* Length about six inches. Upper parts olive-green, with darker centres to the feathers; wings brown with pale edges; tail brown, the utmost feather white; under parts yellowish-white, darker on the breast, where it is spotted with dark

1 Blue Tit

2 Long tailed Tit

3 Pied Wagtail

4 Rays Wagtail



brown; a dark streak passes down from the beak on each side the throat.

The Pipits were formerly associated with the Larks, with which, indeed, they have a good deal in common, both in appearance and habit. The present species visits us in April, and charms us with its sweet though simple song, which it utters both on a twig and in the air. The nest is usually concealed among the herbage, on the earth.

ANTHUS PRATENSIS. *The Meadow Pipit.* Length six inches. The colours of this species very closely resemble those of the preceding; but the spots on the breast are more numerous; the general form, and that of the beak and hind toe, in particular, are more lengthened and slender.

Its manners are almost exactly the same, but it frequents open grounds, commons, and moors, more than woods. It sometimes sings when standing on a stone or a clod of earth. The food of the Pipits consists chiefly of insects.

ANTHUS PETROSUS. *The Rock Pipit.* Length six inches and a half. Upper parts dark olive-brown; the tail pale in the middle and at each side, inclining to be forked; chin whitish; under parts pale brown, becoming more decidedly olive below, indistinctly mottled and spotted with brown; the hind claw is longer even than in the preceding.

The haunts of the Rock Pipit are the sea-coasts, whether flat or rocky, and salt marshes of their vicinity. It feeds among the seaweeds on minute shells and crustacea; and remains associated in pairs all the year round. Its nest is constructed on the ground; "and if the coast is bounded by rock or cliff, the favourite places are the grass-grown ledges, at various elevations, on the surface opposed to the sea. The nest is made up of several sorts of dry grasses; the eggs are four or five in number, of a greyish white, tinged with green, and mottled nearly all over with ash-brown*."

* Yarrell.

CHAPTER V.

MAY.

MAY is certainly the most delightful month of the whole twelve. The fears of winter's return no more disquiet us; the weather is for the most part bright and sunny, and the air has a genial warmth not yet heightened into the raging heats of summer. The beauties of the natural world have acquired a charming maturity, and yet retain the sweet freshness and novelty of spring; the tender green of the newly opened trees has not given place to the dark and dull hue, which, shabby and caterpillar-gnawed, they too soon assume; and the verdure of the thorn hedges is not begrimed by summer's dust. The evenings are growing long, and we willingly protract our walks till the lengthening twilight at length fades into night, beguiled by the multi-

tude of varied charms that invite our senses to enjoyment. The morning air is ringing with melody, the evening dews are loaded with fragrance; for the voices of thousands of birds now vie with each other in pouring forth their hymns of praise, and in cheering their mates now engaged in the self-denying business of incubation; and the perfume of myriads of flowers ascends upon the air, from coppice and grove and hedgerow, from bush and brake, from mossy bank and shaded dell, from garden and field, from heath, and river-side, and carpeted meadow. The Swallow and the Bat, those lovers of spring, always associated with the most delightful of seasons, pursue their insect prey together; the denizen of the day and of the night mutually encroaching on each other's domain: the one eager to enjoy his evening sport so lately resumed; the other loath to relinquish his energetic and exciting aerial course, and to fold his untired wing. Nor is there wanting, to sum up our gratification, the sweet low voice of the Cuckoo; its soft double note, mellowed by distance as it falls upon the delighted ear, borne on the balmy breeze from some far-off tree, so full of associations of pleasure, that we cannot refrain from taking up the sound, and throwing back to the bird his own notes, with an almost childish joy.

There is in the time of spring
Poetry in every thing !
In the clear and sparkling dew ;
In the flowers of every hue ;
In the gambols of the lambs,
Round their staid and careful dams ;
In the leaves as they unfold,
Bathed in nature's matchless gold ;
In the sun's more brilliant ray,
In the slowly lengthening day ;
In the transports of the child,
O'er her bells and cowslips wild ;
In the self-important rook ;
In the murmur'ring, sparkling brook ;
In the little midge's dance ;
In the courser's neigh and prance ;
In the field with kingcups strew'd ;
In the songsters of the wood ;
In the soft and balmy air ;
In the farmer's added care.
Spring ! whate'er we hear or see,
Breathes sweet poetry of thee.

The history of the Cuckoo involves a peculiarity of instinct so extraordinary, and, among British birds, so unique, that we shall examine it somewhat in detail. So far as we know, it is the habit of all the species of the

restricted genus *Cuculus*, amounting to about fifty,—all of which are confined to the Old World,—to build no nest, but to deposit their eggs singly in the nests of small, and for the most part insect-eating, birds. Thus our own Cuckoo selects the Hedge-sparrow, the Titlark, the Robin, the Whitethroat, the Wagtail, the Chaffinch, the Linnet, and several others, but especially the first-named. And it is a very remarkable fact, that notwithstanding the immense disparity there exists between the size of the Cuckoo and that of all these birds, there is very little between their eggs; the egg of the Cuckoo being of the exact dimensions of that of the Skylark. Five or six eggs are deposited by the female Cuckoo in the course of the season, extending from the middle of May to the middle of July; but no more than one is ever (unless by an extraordinary exception) dropped into one nest.

After fourteen days' incubation, the young Cuckoo is hatched, and as the support of so large a bird alone is sufficiently arduous for the foster-parents, it is necessary that their own eggs and young should be destroyed; and this is always effected by the young Cuckoo, in the manner thus observed and described by Dr. Jenner:—“On the 18th of June, 1787,” he observes, “I examined the nest of a

Hedge-sparrow, which then contained a Cuckoo and three Hedge-sparrow's eggs. On inspeeting it the day following, the bird had hatched; but the nest then contained only a young Cuckoo and one Hedge-sparrow. The nest was placed so near the extremity of a hedge, that I could distinctly see what was going forward in it, and to my great astonishment, I saw the young Cuekoo, though so lately hatched, in the aet of turning out the young Hedge-sparrow. The mode of aecomplishing this was very curious; the little animal, with the assistanee of its rump and wings, contrived to get the bird upon its baek, and making a lodgment for its burthen by elevating its elbows, elambered baekwards with it up the side of the nest till it reached the top, where, resting for a moment, it threw off its load with a jerk, and quite disengaged it from the nest. It remained in this situation for a short time, feeling about with the extremities of its wings, as if to be eonvinced whether the business was properly executed, and then dropped into the nest again. With these, the extremities of its wings, I have oftcn seen it examine, as it were, an egg and nestling, before it began its operations; and the niee sensibilities which these parts seem to possess, seemed sufficiently to eompen-
sate the want of sight, whieh as yct it was destitute of. I

afterwards put in an egg ; and this, by a similar process, was conveyed to the edge of the nest and thrown out. These experiments I have since repeated several times, in different nests, and have always found the young Cuckoo disposed to act in the same manner. In climbing up the nest, it sometimes drops its burthen, and thus is foiled in its endeavours ; but after a little respite, the work is resumed, and goes on almost incessantly till it is effected. The singularity of its shape is well adapted to these purposes, for, different from other newly hatched birds, its back, from the shoulders downwards, is very broad, with a considerable depression in the middle. This depression seems formed by nature for the design of giving a more secure lodgment to the egg of the Hedge-sparrow, or its young one, when the young Cuckoo is employed in removing either of them from the nest. When it is about twelve days old, this cavity is quite filled up, and then the back assumes the shape of nestling birds in general.

" Having found that the old Hedge-sparrow commonly throws out some of her own eggs after her nest has received the Cuckoo, and not knowing how she might treat her young ones if the young Cuckoo was deprived of the power of dispossessing them of the nest, I made the following ex-

periment:—July 9th, a young Cuckoo, that had been hatched by a Hedge-sparrow about four hours, was confined in the nest in such a manner that it could not possibly turn out the young Hedge-sparrows, which were hatched at the same time, though it was almost incessantly making attempts to effect it. The consequence was, the old bird fed the whole alike, and appeared in every respect to pay the same attention to their own young as to the young Cuckoo, until the 13th, when the nest was unfortunately plundered*.”

Here are several circumstances that call for our admiration as examples of the perfect wisdom with which all the details of the works of God are arranged. The first is the invariable selection, by the parent, of a nest belonging to some bird which feeds its young with insects; for as the foster-parent of course can only present to its bantling the same kind of food as that which it would procure for its own offspring, if this were ungenial to it, it could not be reared. Then the small size of the strange egg in all probability prevents the little bird’s detection of the imposition, until the hatching of the young, after which the impulse of parental affection would be naturally drawn towards

* Phil. Trans. 1788.

a young one hatched by herself, perhaps not at all diminished by its unusually fine and superior appearance. But the exorbitant demands made upon the foster-parents by the ravenous appetite of so large a chick, make it needful that their whole exertions be bestowed upon it alone ; and therefore the expulsion of the other eggs or young is a provision of mercy towards the parent birds. This necessity then being admitted, we see the beautiful adaptation of means to an end, first in the implantation of a restless and irresistible desire in the young Cuckoo to eject from the nest any other object, be it egg or bird, and secondly, in the peculiar flat and hollow structure of the loins, by which it is enabled to effect its object ; a peculiarity of structure which, as we have seen, entirely disappears at an age when the design has been accomplished. The same instinct also explains the reason why the nests chosen by the parent Cuckoo are those of small birds. Small birds build small nests ; but if the depth were great, the strength of the young Cuckoo would be unequal to the exertion of elevating the egg or bird to the margin, and so throwing it over ; and we may add also, that the same difficulty would exist if the nestlings to be ejected were not much smaller in size than the young Cuckoo.

But the question naturally presents itself,—Why is this extraordinary deviation in the Cuckoo, from an instinct and habit all but universal? Is there any discernible cause in the other habits of this bird, that prevents its following the general rules of incubation? Dr. Jenner suggests a very plausible reply to this question: “The short residence this bird is allowed to make in the country where it is destined to propagate its species, and the call that nature has upon it during that short residence, to produce a numerous progeny, [may explain the anomaly]. The Cuckoo’s first appearance here is about the middle of April, commonly on the 17th. Its egg is not ready for incubation till some weeks after its arrival, seldom before the middle of May. A fortnight is taken up by the sitting bird in hatching the egg. The young bird generally continues three weeks in the nest before it flies, and the foster-parents feed it more than five weeks after this period; so that if a Cuckoo should be ready with an egg much sooner than the time pointed out, not a single nestling, even one of the earliest, would be fit to provide for itself, before its parent would be instinctively directed to seek a new residence, and be thus compelled to abandon its young one,—for old Cuckoos take their final leave of this country the first week in July.”

This explanation, satisfactory as it is, does not entirely remove the difficulty ; and other causes of the aberration have been sought in certain anatomical peculiarities, to which in such a work as the present we can only allude. The economy of the Cuckoo is, however, one of the most interesting points in the range of British Ornithology.

We devote our descriptive pages for the present month to a few families, very slenderly represented in Britain, the chief of whose members are among the latest of our vernal migrants. To these, however, we add the Woodpeckers, which are resident with us.

LANIUS.

Gen. Char. Beak short, rather high than broad, the upper mandible strongly curved to a point, and armed with a distinct tooth on each side; gape set with bristles; wings of moderate length; claws not formed for grasping.

LANIUS EXCUBITOR. *The Grey Shrike.* (Plate II.) Length ten inches. Upper parts pearly-grey; a black band passing from the beak through the eye, expands over the ear-coverts; wings and tail black, tipped with white; on the latter increasingly from the centre outward; the tail is

much graduated; two white square spots are in the middle of the wing; whole under parts pure white.

The Grey Shrike, or Buteher-bird, is but a winter visitant to this country, and that not a constant one. Its latter name is derived from a habit whieh, in common with others of the genus, it possesses of impaling its prey on a sharp thorn before it is devoured; the weakness of its feet, probably, is the reason why the bird has recourse to this artifice as a means of securing its victim, while it is pulled to pieces in its falcon-like beak. Large insects, reptiles, small birds, and quadrupeds afford it sustenance; and the vertebrate animals are usually killed by breaking their skulls. It seems to be no fable that the Shrike allures small birds within reach by imitating their notes.

LANIUS COLLURIO. *The Red-backed Shrike.* Length seven inches and a half. The head, neck, and rump are ash-grey; the back and wing-coverts chestnut; wings blackish, edged with red; the tail white for half its length, the remainder black; the middle feathers, however, are wholly black, except a narrow white tip; under parts white, delicately tinged with red; the black spot on each side of the head as in the Grey Shrike.

The habits of this species are the same as those of the

last, but its size and powers are inferior. It is also a migratory visitor, but appears in the summer, and is not uncommon. It builds a large nest in a thick bush or hedge; and lays four or five eggs, varying in appearance.

MUSCICAPA.

Gen. Char. Beak rather stout, triangular, broad and depressed, tapering to a point, which is bent downwards; gape set with bristles; wings rather long; the first quill minute; the third longest; feet weak.

MUSCICAPA GRISOLA. *The Spotted Flycatcher.* Length five inches and a half; upper parts dark brown; the wing-feathers with paler edges; under parts white, studded with dashes of brown, especially on the sides of the breast.

A regular summer visitor in all rural districts, this little bird is well known, though it is not seen until late in the spring. It is sometimes called the Post-bird, from its habit (which is, however, common to the species of this extensive family) of taking up its station on some prominent object, where it watches for passing insects: on the appearance of one, it darts out, captures it in the air, and return to its watch-post to eat it, after which it watches as

before. It is also called Beam-bird, from its frequently placing its nest on the beam or rafter of an outhouse. The nest is a neat structure, and contains four or five eggs. The voice of the Flycatcher is only a feeble chirp.

MUSCICAPA LUCTUOSA. *The Pied Flycatcher.* Length about five inches. Upper parts black, less pure on the head; forehead pure white; a large patch on each wing, and one on each side of the tail white, as are also the whole under parts. The female has the upper parts brown instead of black, and no white on the forehead.

This is much rarer than the preceding species, though it arrives much earlier; in one locality, viz. about the lakes of the north of England, it is moreover not unfrequent. Its note is pleasing.

CAPRIMULGUS.

Gen. Char. Beak excessively small, flexible, curved at the point; the gape very wide, and set with strong bristles, pointing forwards and outwards; wings long and pointed; legs very short; feet small and weak; plumage soft.

CAPRIMULGUS EUROPÆUS. *The Night-Jar.* (Plate XVII.) Length ten inches and a half; whole plumage freckled and pencilled in a way not to be described, with shades of grey,

brown, white, and buff; the head is principally grey, speckled, and striped with black; a line of white passes from the gape below the ear-coverts; across the throat a dash of white; the first three quills have each a large patch of white on the inner web.

This singular but beautiful bird is sometimes called (from a foolish prejudice) the Goat-sucker; it is also known as the Fern-owl, and as the Churn-owl. Some of these names refer to its nocturnal habits, to the resemblance of the character and markings of its plumage to those of the Owls, or to the peculiar jarring sound uttered by this bird, like the whirr of a spinning-wheel. The Night-jar arrives with us very late, coming about the middle of May, and it departs in August. It feeds on large moths, beetles, and other night-flying insects, which it catches on the wing, aided by its enormous bristled mouth. Two beautiful eggs are laid on the bare ground, without any nest.

CUCULUS.

Gen. Char. Beak curved, and compressed to the tip; nostrils opening in a naked membrane at the base; wings long and pointed; tail long, graduated; legs very short, partially feathered; toes placed two before and two behind.



1. Great Wood-pecker

2. King E.

4.

4. King

R. B. & R. M.

CUCULUS CANORUS. *The Cuckoo.* (Plate VIII.) Length fourteen inches; upper parts slate-grey; wing-quills and tail-feathers darker, and barred with white; throat and breast pale-grey; belly white, with transverse blackish bars; eyes, eyelids, and feet yellow; beak bluish.

The welcome voice of the Cuckoo is heard in April, as soon as it arrives from the sunny south; and it immediately sets about its preparation for the continuance of its race. The peculiarities of its economy we have already detailed in the preceding pages. It is a remarkable fact that the egg of the Cuckoo is not larger than that of the Lark, although the bird is four times as large. Soft insects, principally caterpillars, form the food of the Cuckoo.

PICUS.

Gen. Char. Beak as long as the head, straight, pointed, wedge-shaped; nostrils concealed by close-set hairs pointing forwards; feet very powerful, formed for clinging to perpendicular surfaces; toes in pairs, two before and two behind; tail-feathers very stiff and sharp.

PICUS VIRIDIS. *The Green Woodpecker.* (Plate VIII.) Length thirteen inches; beak, cheeks, and region around the eyes black; crown and hind-head rich scarlet; an

oblong patch below the cheeks scarlet, edged with black; neek, baek, and wings dark green; rump bright yellow; wing-quills and tail blaekish barred with whitish; whole under parts yellowish-grey. The female has the patch on each side of the chin wholly black.

This is one of our gaily-coloured British birds, abiding in our wooded districts the whole year. It digs away with its hard and powerful chisel-formed beak the bark and wood of decaying trees, in order to dislodge the numerous insects, particularly wood-boring *larvæ*, that inhabit them; it also frequently regales on ants and their pupæ. A snug chamber hewn out in the wood of a tree by their own labour, serves the Woodpeckers for the scene of their domestic economy; where the present species deposits four or five eggs, of a beautifully clear and glossy white.

PICUS MAJOR. *The Greater Spotted Woodpecker.* (Plate VIII.) Length nine inches and a half. General plumage of the upper parts blaek; a spot on the hind-head deep scarlet; forehead, eheeks, and ear-coverts, a pateh on each side of the neek, a larger oblong pateh on the shoulders, and under parts generally, white; the quills of the wings, and the outer tail-feathers largely barred with white; the vent and under tail-feathers erimson.

PICUS MINOR. *Lesser Spotted Woodpecker.* Length six inches. Crown bright scarlet; forehead, cheeks, ear-coverts, and neck white; hind-head and a patch beneath the ears black; forepart of the back and shoulders black; back and wings alternately barred with white and black; tail black, the outmost feathers barred with white; under parts greyish-white, slightly streaked on the sides. The female has the crown dirty white.

Both this and the preceding species are sufficiently common in England; their manners and economy do not materially differ from those of the Green Woodpecker.

YUNX.

Gen. Char. Beak straight, pointed; tongue long, projectile; tail ample, composed of soft feathers, nearly even.

YUNX TORQUILLA. *The Wryneck.* Length seven inches; general plumage grey, minutely and closely speckled, and barred with brown; a dark line runs down the back of the neck; the wings varied with some yellowish spots; the tail crossed by four black bars; neck and throat buff, pencilled transversely with black; under parts yellowish-white, spotted with black.

The Wryneck has many of the habits of the Woodpeckers, but its soft tail considerably lessens its power of climbing trees. It feeds principally on ants. An odd habit of throwing the head and neck about in strange contortions, has given the common name of this bird. It is a migratory visitant of this country, arriving about the same time as the Cuckoo, whence it is called in some parts of England the Cuckoo's Mate. Its eggs are five in number, of a pure and polished whiteness; and are deposited in the hole of a tree.

CHAPTER VI.

JUNE.

“**T**HREE arc few people,” says Mr. Jesse, “ who do not enjoy a walk on a fine smiling day in June, along meadows through which a stream of water takes its restless and meandering course.” It is indeed very delightful. Everything is redolent of enjoyment; the plains ring with the broad jests and loud merriment of the swains and rustic maidens, engaged in that rural work which, of all the labours of the farm, approaches nearest to play, hay-making; and the fragrance of the half-dried grass comes delightfully rich upon the sense. The whetting of the mower’s scythe in another part of the field, though not particularly musical in itself, we never hear without pleasure. Then as we pursue our vagrant way beneath the pollard willows that fringe the stream, or diverge along a honeysuckles hedge to cross a

stile, or step out of our way to pluck an inviting bunch of dog-roses, or brush off the heavy dew from the high grass, loading our feet and garments with its wetted pollen, we are struck with the profusion of insect-life that is now abounding everywhere. May-flies and caddis-flies are dancing over the stream or resting on its wrinkling surface, alternately the prey of the leaping trout, or of the beautiful but grim dragon-fly, whose ample talc-like wings are sweeping hither and thither; multitudes of little moths play over the waving grass, or are roused in hundreds from before our intruding steps; butterflies are flitting along in the bright sun; while the trees and hedges are swarming with delicately formed and tinted insects of all orders, chiefly the smaller *Hymenoptera* and *Diptera*, whose vibrating wings throw off tiny sparkles of light at almost every point to which we direct the eye, and produce a sweet murmuring sound, or rather a union of many sounds, separately indistinguishable, but audible by their multiplication; that “ceaseless hum,” which the poet of the Seasons describes as so delightful

“ To him who muses through the woods at noon;
Or drowsy shepherd, as he lies reclined,
With half-shut eyes, beneath the floating shade
Of willows grey, close crowding o’er the brook.”

Many of the birds that enlivened our former walks with their melody, are melodious no more ; they have performed the great business that incited their song, and are now silent ; but though we miss many familiar notes, there are many that yet remain : the groves in June are not silent. The Skylark and the Woodlark pour forth their rich songs on the air, and the Song-thrush still delights to sit at morn and even on the very topmost twig of his favourite tree, giving utterance to his gushes of melody. The nightingale, it is true, is mute ; but the deep, sweet, and varied tones of the Blaekape, with which he relieves the monotony of his mate's patient task and even his own share in it, scarcely allow us to perceive the loss. And besides these, there are many minor voices in the orchestra, as those of the Wren and Robin, the Goldfinch and the Greenfinch, the Whitethroat, the Reed Warbler, and the Yellow-ammer.

As we approach the homestead of the estate through which we are rambling, a magnificent spectacle suddenly arrests the eye. It is the gorgeous Peacock perched on yonder out-house roof enjoying this warm summer's sun, as he marches in stately pride to and fro, and ever and anon elevates his expanded train, glittering in the noon-day beam like a canopy studded with jewels.

Many persons even yet are not aware that the resplendent feathers which form the peculiar glory of this bird, are not the tail; such however is the case, these feathers not growing from the extremity of the body, but all up the back. "A range of short, brown, stiff feathers, about six inches long, is the real tail, and serves as a fulcrum to prop the train, which is long and heavy, when set on end. When the train is up, nothing appears of the bird before, but its head and neck, which would not be the case were these long feathers fixed only in the rump, as may be seen by the turkey-cock, when in a strutting attitude."

How long the Peacock has been an inhabitant of European farmyards, it is impossible to say with certainty; the early Greek writers speak of it as known in Greece in their time, and long before that, we know that it was regularly imported into Judæa, from the far east, in the navy of King Solomon. The dense forests of India are the home of the species, and there it is found in immense flocks, and in unrivalled beauty. Colonel Williamson speaks of whole woods in the Jungleterry district, as being covered with their beautiful plumage, radiant in the beams of the rising sun; and of twelve or fifteen hundred pea-fowls of various sizes being in sight at once.

In a wild state the Pea-hen chooses some retired spot for her nest, among low and close bushes, where she accumulates a heap of dry sticks and leaves, and lays from twelve to fifteen eggs; and her habits in a domestic condition do not differ materially from these.

The susceptibility of those animals, whose flesh is most valuable to man, to thrive in a domesticated condition, is a very beneficent provision of God's wisdom. This is pre-eminently the ease with the ruminating animals among the *Mammalia*, and with the poultry among Birds; and these two orders, the *Ruminantia* and the *Rasores*, are considered by zoologists as analogous to each other. The imperfect power of flight possessed by the poultry-birds, renders them in general more stationary in their habits than those of other orders, and thus they more readily become reconciled to the semi-liberty of domestication. But this has an evident connection with the excellency of their flesh as food; for as in the powerful fliers the muscular force of the whole body is concentrated in the action of flight, the texture of the muscles in them becomes necessarily tough and sinewy, indigestible and dry. But in the poultry, the power of their wings, for the most part, is little more than sufficient to enable them to reach an elevated roosting-place;

and the muscles generally are soft, tender, juicy, and easy of digestion. Their food principally consists of farinaceous grains and seeds.

The most valuable of our domestic birds are, beyond comparison, the common Cock and Hen; and these have been from very ancient times under the care of man. Like the Peacock, there is no doubt that our domestic Fowls came originally from India, but at what period history gives us no information. Some of the Greek writers call the Cock "the Persian bird," and assert that it reigned over that country long before Darius. In the forests and jungles of India and the great adjacent islands, there are still found several fine species of fowls, to some of which our domestic race is considered to owe its origin, but naturalists are not agreed which. The gigantic Cock of Malacca (*Gallus giganteus*) and the Bankiva Cock of Java (*G. bankiva*) seem to present the best claims to the honour. The former is a noble bird, standing two feet and a quarter in height; the hackles, or long narrow feathers of the neck and back, are of a pale golden-reddish hue; the tail is very ample and, with the wing-coverts, of a glossy green, and the under parts are of a blackish-green richly glossed. The Bankiva Cock is about the size of our large breeds; the comb is largely

developed, deeply notched on the top ; the hackles long, and of a brilliant golden-orange ; the tail and under parts are glossy-black, and the wings are partly chestnut and partly steel-blue.

In domestication, the varieties in size, form, plumage, and aspect of the common Cock, are much more conspicuous, if not more important, than the diversity between wild races, which are recognized as possessing specific distinction. Great variation is the common result of domestication, particularly in form and colour ; and hence the difficulty of identifying animals in servitude with species in freedom. "The Spanish breed, entirely black, grows to a considerable size, and the eggs are remarkable for their volume. The Dorking poultry have long been celebrated, and they are known principally by having supernumerary toes. The true Dorkings are purely white, and are much esteemed for the table. Dr. Latham mentions one of this breed that weighed nearly fourteen pounds. Some of the Sussex fowls are very fine.

"The fancy breeds are very numerous ; among them the Dutch and Polish top-knotted and pencilled breeds, of two sorts, known as Gold-spangles and Silver-spangles, are much prized by amateurs if clean-feathered, and make a very

handsome appearance in the poultry-yard. Sir John Sebright brought a dwarf Bantam breed, with unfeathered legs, no topknots, and gold-spangled and silver-spangled plumage, to great perfection. These clean-legged bantams were remarkable, when true bred, for having the tail of the cocks folded like that of a hen, and without the usual recurved drooping feathers; whence they were called hen-cocks. But though without these feathers, which are usual indications of the common Cock, no birds could possess higher courage or a more gallant carriage; we have seen one of these cocks bear himself so haughtily that the back of his head nearly touched the two almost upright feathers of his tail; and both cocks and hens without one foul feather about them. The ordinary bantams have feathered legs, and the recurved sickle-like tail-feathers*. Besides these, there is a variety with purple comb and wattles, whose bones are black; as are also those of the Silk fowl, of white plumage, but unwebbed and soft to the touch; these are excellent eating. The Rumkin is destitute of even the smallest vestige of a tail, and the Friesland breed has all the feathers turned up at the tips in a very odd manner. The spurs of the Game Cock are unusually long, and this

* Penny Cyclopædia.—Art. PHEASANT.

breed is so pugnacious that it is with difficulty they can be reared.

The qualities desirable in a Cock are thus enumerated by M. Parmentier in his Dictionnaire d'Agriculture. "He is considered to have evry requisite quality when he is of a good middling size; when he carries his head high; has a quick animated look, a strong and shrill voice, a short beak, a fine red comb, shining as if varnished; wattles of a large size, and of the same colour as the comb; the breast broad; the wings strong; the plumage black, or of an obscure red; the thighs very muscular; the legs thick and furnished with strong spurs; the claws rather bent and sharply pointed. He ought also to be free in his motions, to crow frequently, and to scratch the ground often in search of worms, not so much for himself as to treat his hens. He ought withal to be brisk, spirited, ardent, and ready in caressing the hens; quick in defending them, attentive in soliciting them to eat, in keeping them together, and in assembling them at night."

The hatching of domestic poultry by means of artificial heat, has long been practised in Egypt. The eggs are laid in thousands on mats over the brick floors of long ovens, through which heated air is conducted from slow fires, as

long as needful for the evolution of the chick, which is a period of twenty-one days. One hundred millions of chickens are annually hatched thus.

A few years ago, Mr. Bucknell exhibited in London an apparatus which he called the Eccaleobion, by means of which he hatched great numbers of eggs; and this gentleman published a treatise on artificial incubation, containing some interesting statistics on the subject. "Artificial mothers" have been proposed for affording the needful shelter and warmth to the young chickens artificially hatched; consisting of a low box with a sloping roof, lined with flannel and sheep-skin, under which the chicks may run and crouch, as under a hen, their backs being in contact with the wool; the apparatus would of course require to have the needful warmth supplied either naturally or artificially.

MEROPS.

Gen. Char. Beak long, slender, compressed, pointed, slightly arched, the upper margin ridged; wings long, pointed; the first quill minute; feet small and weak; toes united at the base.

MEROPS APIASTER. *The Bee-eater.* Length eleven

inches; forehead pale verdigris-green, which passing over each eye is gradually lost in the hue of the head; crown, nape, and upper parts, rich orange-brown, becoming yellow on the rump; wing-quills bluish-green with blackish tips; tail glossy blue-green, the middle pair of feathers produced into two points; chin and throat golden-yellow, bounded above by a black crescent across the throat; under parts greenish-blue, with changing reflections; the eyes red; the beak black.

This brilliant bird is an accidental visitor from North Africa and Southern Europe, but it has often been seen here. It feeds on bees, and other large insects, which it captures on the wing.

CORACIAS.

Gen. Char. Beak stouter, shorter, more compressed, upper mandible arching to the point; gape wide, set with bristles; wings long, second quill longest; tail more or less forked; feet short, but in a less degree than in the Bee-eater.

CORACIAS GARRULA. *The Roller.* (Plate VIII.) Length thirteen inches; back, scapulars, and tertials pale chestnut; smaller wing-coverts, wing-quills, rump and tail-coverts rich changeable blue or purple; head, neck, upper back,

greater coverts, and whole under parts light greenish-blue; tail dark greenish-blue at the base, becoming lighter and greener towards the tip. In the male the outmost feather on each side the tail is lengthened beyond the rest.

Like the preceding the Roller is but a brilliant stranger; and he has little besides his plumage to recommend him; his manners are sly and recluse, and his voice harsh.

ALCEDO.

Gen. Char. Beak stout, angular, compressed, pointed; gape wide; wings short; tail very short; feet small and weak; outer toe united to the next.

ALCEDO ISPIDA. *The Kingfisher.* (Plate IX.) Length seven inches; crown, nape, a band on each side the throat, the wing-coverts and tertials, dark-green studded with spots of brilliant verditer-blue; cheeks and ear-coverts pale chestnut; throat and sides of the neck white; lower back, rump, and tail-coverts verditer-blue; wing-quills blackish with green edges; tail deep blue; under parts pale chestnut.

The radiant plumage of this little bird gleams like a meteor, as it shoots along beneath the river-bank. It remains with us the whole year, haunting streams, over

1. Swift

2. Kingfisher

3. Hoopoe



which it watches for fishes; when one passes beneath, down drops the bird and never fails to seize it. It breeds in holes in gravelly banks.

CREX.

Gen. Char. Beak shorter than the head, stout at the base, the summit of which divides the plumage of the forehead, slightly bent to the point; nasal furrow broad; nostrils pierced in a membrane; wings armed with a spine; legs strong; feet large; front toes long, slender, unconnected; hind toe small, nearly on the plane of the others.

CREX PRATENSIS. *The Land Rail.* (Plate X.) Length ten inches; general tint of the upper parts yellowish-brown, each feather having a centre of dark-brown; space above the eyes, the cheeks, and ear-coverts, grey; wing-coverts bright rust-red; quills rather darker; under parts buff, the sides and flanks barred transversely with brown.

The Corn Crake, as this bird is sometimes called from its singular rattling note, is common during summer in the high grass of meadows, beds of reeds, and other similar covers, through which the thinness of its body enables it to run with remarkable facility. Insects, worms, slugs, and small reptiles constitute its food.

An extraordinary instance of sagacity in this bird is thus related by Mr. Jesse: "A gentleman had a Corn Crake brought to him by his dog, to all appearance quite dead. As it lay on the ground, he turned it over with his foot, and was convinced that it was dead. Standing by, however, in silence, he suddenly saw it open an eye. He then took it up; its head fell; its legs hung loose, and it appeared again quite dead. He put it in his pocket, and before long he felt it all alive, and struggling to escape. He then took it out,—it was as lifeless as before. Having laid it again upon the ground, and retired to some distance, the bird in about five minutes warily raised its head, looked round, and decamped at full speed*."

CREX PORZANA. *The Spotted Crake.* Length nine inches; upper parts dark-brown, inclining to olive on the neck, and spotted with white; tertials crossed with narrow white lines; chin greyish; throat and breast olive or dusky, spotted with white; under parts buff, fading to white along the medial line, barred on the sides with white and grey. Frequent in the vicinity of water in summer.

* Gleanings, p. 263.

RALLUS.

Gen. Char. Beak longer than the head, compressed at the base, slender, cylindrical, slightly curved at the tip; nasal furrow long and broad; wings short and rounded; legs and feet as in the preceding.

RALLUS AQUATICUS. *The Water Rail.* Length eleven inches; beak red; legs and feet olive-green; upper parts olive-brown, with dark centres; face, throat, and breast dull grey; sides and flanks barred with dark-grey and white; vent and under tail-coverts pale buff.

The Water Rail spends the year in our marshes, where its habits are much the same as those mentioned of the Land Rail, skulking under cover of reeds, through which it runs with great speed. It flies heavily and awkwardly, the legs hanging down. In the water it is able to swim and dive.

GALLINULA.

Gen. Char. Beak short, compressed, high at the base, which is dilated on the forehead into a flat shield; nasal furrow wide but shallow; legs short but stout; toes long, slender, entirely cleft, bordered with narrow membranes.

GALLINULA CHLOROPUS. *The Moor-hen.* (Plate X.) Length thirteen inehes ; beak, legs, and feet, yellow-green ; the base of the former, with the shield, and a band enireling the legs above the heel, searlet ; upper parts very deep-brown, glossed with green ; quills umber-brown ; under parts blackish-grey, streaked with white on the flanks and thighs ; under tail-eoverts white. The female is more riehly coloured than the male.

In reed-margined rivers and seeluded ponds the Moor-hen is a well-known resident, swimming swiftly along or playing about, the searlet-fronted head ever in motion, turning hither and thither, pieking seeds and inseets from the surfaee. If alarmed, it flutters along the water with mueh splashing, to gain the shelter of the reeds, or else takes refuge in diving, whieh it does with great ease. It makes a large nest of eoarse herbage near the brink of the water, laying six or more eggs.

FULICA.

Gen. Char. Beak still higher than in *Gallinula*, dilated into a shield ; wings moderately long, and pointed ; toes furnished with a border, which is dilated at intervals into broad, rounded lobes.



R. B. & R. J. M.

FULICA ATRA. *The Coot.* (Plate X.) Length sixteen inches; beak and shield ivory-white; plumage greyish-black; secondaries sometimes slightly tipped with white; legs and feet greenish; space above the heel orange.

The Coot is still more aquatic than the Moor-hen, and is found not only in fresh waters, but on many parts of the sea-coast, particularly on the mud-banks of harbours and bays. It is a social bird, associating in great flocks; and many are often shot at once; the flesh is esteemed for the table. Fishes and aquatic animals, various seeds and grains, constitute the food of this bird. It makes a huge nest of coarse materials, among the reeds; the young are able to walk at a very early age.

PHASIANUS.

Gen. Char. Beak strong, convex, arched to the tip; nostrils covered with a scale; cheeks and orbit naked, warty; wings short; first quills narrowed at the tips; fourth and fifth longest; tail very long, graduated, composed of eighteen feathers.

PHASIANUS COLCHICUS. *The Pheasant.* (Plate XIV.) Length three feet, fully two of which belong to the tail; naked orbits scarlet; head and neck rich deep-blue, re-

flecting other hues; upper parts orange-red, the feathers near the neck tipped with black, lower down with pale yellow, with a dark centre; loins and rump light rust-red; wing-quills dusky-brown; tail pale fawn-colour, with numerous black bars; breast and belly golden-red, each feather bordered with deep black, and reflecting golden and purple gleams; hinder parts dusky; beak whitish; legs and feet dull grey. Female dull yellowish-brown, varied with darker shades.

GALLUS.

Gen. Char. Beak naked at the base, furnished with two compressed and pendent wattles; head crowned with a fleshy crest or comb; legs (of the male) armed with a long recurved spur; hind toe touching the ground at its tip; tail-feathers fourteen, folded on each other.

GALLUS BANKIVA? *Domestic Cock and Hen.* (Plate XIV.) To describe the plumage of birds so varying as our domestic poultry, would be useless, as the description would be only that of an individual; and it would be needless also. We have already spoken of their economy.

PAVO.

Gen. Char. Beak smooth at the base, cheeks partially naked; head surmounted with a crest of narrow upright feathers; sixth quill the longest; tail-feathers eighteen; tail-coverts very large and erectile.

PAVO CRISTATUS. *The Peacock.* Length about five feet. The crest composed of twenty-four feathers, whose slender shafts are barbed only at the tips; head, throat, neck, and breast, rich blue, with metallic reflections; the upper parts are of a reddish brown, bronzed and variegated with black and green; the under parts black with green reflections; the tail-coverts, which compose the radiant train, are of a splendid golden-green, their barbs long, silky, and loose; their extremities very broad, and marked with a magnificent eye-like spot; the centre of this, which is kidney-shaped, is of the richest purple, surrounded by a band of green, which in front widens so as to fill up the depression in the outline of the purple spot; a broad brown band follows, and, lastly, a narrow ring of black edged with chestnut; the whole possessing a sparkling radiance and lustre.

MELEAGRIS.

Gen. Char. Beak furnished at the base with a naked skin ; a fleshy caruncle surmounts it, of a conical form, capable of being lengthened and partly erected ; head and neck clothed with a naked, warty, wrinkled skin, hanging loose over the breast.

MELEAGRIS GALLOPAVO. *The Turkey.* Length three to four feet ; naked skin bluish, changeable to red ; a tuft of stiff black hair on the breast. Plumage in a wild state dark brown or black, each feather with a broad band of rich metallic lustre ; a yellowish band across the tail.

In domestication, the colours are subject to great variety. North America is the native region of this fine bird, where old males sometimes attain the weight of forty pounds.

NUMIDA.

Gen. Char. Beak furnished with a warty membrane at its base, in which the nostrils are pierced ; from the lower mandible hang two caruncles or wattles ; the head is either naked or feathered, and crowned with a bony protuberance, or a feathered crest ; the tail is short.

NUMIDA MELEAGRIS. *The Guinea-fowl.* Length twenty-

1 Land-rail

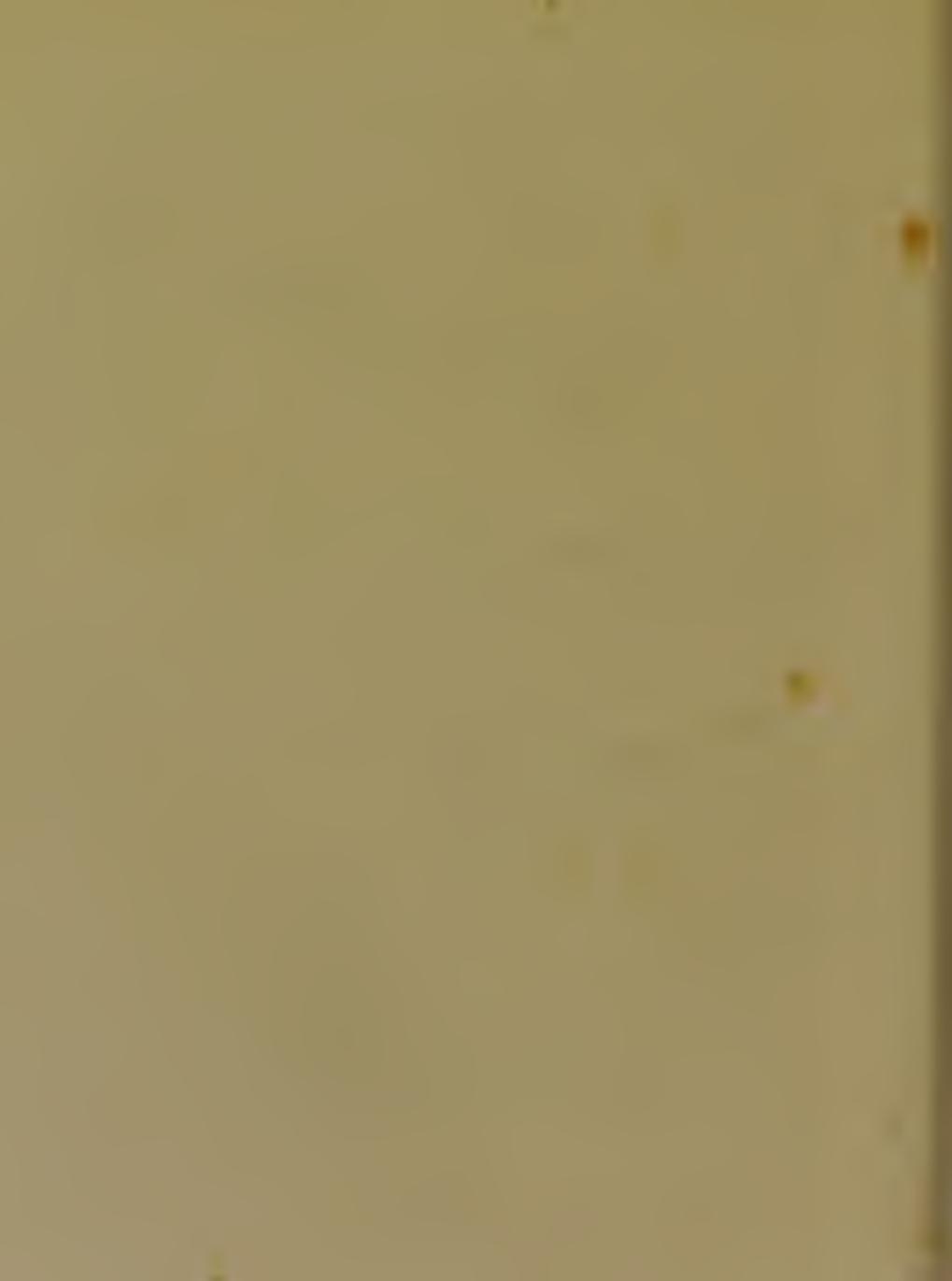
2 Coot

3 Moor-hen



I





one inches ; earunelis searlet, temples and forehead black, crown and ridge yellowish-brown ; eheeks and sides of the head pale blue ; chin, throat, and neek, blaek ; lower neek and breast purplish-brown ; the remainder of the plumage grey with numerous round white spots ; those of the baek surrounded by blaek rings.

The Guinea-fowl, or Pintado, was known to the Romans, who obtained it from North Afriea, where it is still found wild. It is perhaps the least valuable of our domestic poultry ; its habits are restless and wandering, and its voiee is peeuliarly tiresome and disagreeable. Its eggs and flesh are delicate ; the former, however, are not often hatched if the bird be confined ; and if she be allowed her liberty, she will generally lay at a distance from liome, vcry carefully concealing her young brood.

CHAPTER VII.

JULY.

AGAIN will we forsake the green lanes and waving corn-fields of England, now smiling in all the glory of summer, and wend our way to the northern extremity of our native isle; not now to seek the Eagle in the solitude of his heath-clad mountain, but to explore seenes still more wild and strange,—the yawning chasms of precipitous islands around our coast, rugged rocks that tower up perpendicularly into the sky to a frightful height, black and frowning, around whose green and slippery bases the surge of the Atlantie is ever dashing with hollow roar, and boiling with ever-raging whirlpools. For nearly two-thirds of the year the death-like solitude of these dreary ocean-rocks is unbroken, save when a stray Gull seeks a temporary refuge

from the wintry tempest, or a vagrant Cormorant takes his night's lodging among them. But at this season, and for a month or two earlier and later, a very different scene is here presented ; the black rocks are alive with myriads of feathered occupants, some resting, others coming and going, every little shelf or ledge tenanted thickly with patient females sitting on their eggs laid on the bare rock, and the whole air around, as well as the sea, swarming with busy and noisy birds.

↓ Our first visit shall be to the Bass. In the midst of the Frith of Forth, about three miles from the shore, directly opposite the ancient castle of Tantallon, there rises out of the sea a vast rock, nearly circular in its outline, about one-sixth of a mile in diameter. Its sides are precipitous, but the part which faces the shore is much lower than any other ; the outer, or sea-ward side, exposing a front of two hundred feet in height. The top is therefore abruptly sloping, and the general appearance may be imagined by supposing a pillar to be cut off in a very diagonal direction. In fair weather, when there is little swell of the sea, a landing can be effected, not without some risk to the inexperienced, on the inner side ; and on clambering to the summit we find a little stunted grass, affording pasture for

a score of sheep, and a small warren of rabbits. The ruins of a little fortress yet remain, formerly garrisoned, and near it there is a spring of water. The cliffs in some parts are awfully overhanging; and their bases are washed by the incessant surge into caverns, one of which runs quite through the rock, and is tenanted by large flocks of wild pigeons.

But what constitutes the chief peculiarity of this isolated rock, is the countless number of Gannets (*Sula bassana*), which in the breeding season make it their residence. So filled is the air around the island with the flocks of these large birds upon the wing, that they can only be compared to a swarm of bees around a hive, or to the flakes of snow that occupy the atmosphere during a dense and driving snow-storm. The surface of the whole island is almost covered with the sitting birds, their nests, eggs, and young; so that it is scarcely possible to walk without treading on them. "It is perhaps one of the most interesting sights," observes Sir William Jardine, "that the ornithologist can be placed before, whether he surveys the crowd nestling upon their eggs, greeting their mates on their arrival from the sea, or squabbling, if one happens to intrude a little too near another; or to sit aside and view the troops of birds in adult,

and changing, and first year's plumage, pass and repass, surveying their visitor, and sailing past him in a smooth, noiseless flight; so near, that the eye and every feather are distinctly seen, the bird motionless, except a slight inclination of the head when opposite."

The Bass is rented from the proprietor at the rate of about sixty pounds a year, the tenant clearing this sum, in addition to his own expenses and profits, by the proceeds of the Gannets. The flesh of the young birds, and the eggs, are esteemed in many parts of Scotland; and many thousands of the former are sold in the Edinburgh market at the rate of one shilling and eightpence each, so that the trade is sufficiently remunerative. The law ensures to the resident the exclusive right of shooting within a certain limited distance of the island, and every care is taken to protect the old birds from unnecessary disturbance. In consequence of this absence of molestation, the sitting birds become very tame, and in those parts of the island which can be approached, will not only allow of access to them, but will even suffer themselves to be stroked by the hand, as they sit on the nest, without resistance, fear, or even any manifestation of impatience, except a low guttural croak. Sir William Jardine, however, says that they will sometimes

fight at a foot if presented to them, and that a little dog, which accompanied him once on occasion, being somewhat pugnacious, was in danger of losing his sight from the strokes of the birds' beaks, or of being tumbled over the precipices by the blows of their wings.

A mass of seaweeds, grass, and other herbage forms the nest of the Gannet, on which she lays a single egg, about three inches and a quarter long, equally pointed at each end. It is at first of a chalky white, but soon becomes soiled. The male is very attentive to his partner, returning at intervals with three or four herrings in his gorge, which she complacently pulls out and swallows. Sir William Jardine thus describes the mode of fishing of the Gannet :— “The flight and habits at sea are very interesting to witness: when returning to the rock it pursues a straightforward course, at a considerable elevation, without turning to the right or left; but when fishing, it may be seen suddenly to turn, and prepare itself for the plunge, and then follow its survey, the sight having either been mistaken, or the prey disappeared; but when certain, the course is in a moment stopped, the wings closed to the sides, and a perpendicular descent is made, often to a considerable depth, if we may judge from the period of immersion; the spray

dashes up, and the bird is for some time lost, until it again appears with a fish in its beak, whieh is soon got into the proper position and swallowed head downwards." So impetuous is the Gannet's plunge, that he has been known to transfix with his beak a pieee of plank an ineh and a quarter in thiiekness, on which he had deseended to secure a fish that was lying on it.

But we will pursue our course still further northward, and cast anchor among the barren and stormy Orkneys. Standing between two oceans, whose billows for ages have tossed about their feet, these rocky islands still present their bold fronts to the storms and still defy the wave. The rents and fissures that oeeur here and there, and the yawning eaves into which the water dashes with reverberating roar, seem to speak of vietcories gained by that element over the adamantine roek ; and perhaps the same tale is told by the numerous tall and pillar-like fragments that appear to have been foreibly separated from the larger isles near whieh they stand. Of sueh a eharaeter is the Holm of Noss, standing in solitary grandeur about a hundred feet distant from the isle of the same name, from whieh, if we consider the appearanee and formation of both the opposing cliffs, we eannot fail to say it has been either suddenly or

gradually severed. The precipice on either hand is of stupendous height, and the unaccustomed visitor cannot look down into the terrific chasm, where the sea is raging and tossing with unwonted fury, without a shuddering horror. Yet it is to situations such as this that the bold and hardy Orkney fowlers resort, scarcely conscious of danger. For the face of the cliff is teeming with birds; the narrow ledges, the caves, the fissures, all being crowded with tenants of various species, each kind confining itself to its own particular station. "The Guillemots occupy one station, or line of ledges on the rock; the Razor-bills another; the Puffins a third; Kittiwake Gulls a fourth; while the most inaccessible pinnacles seem to be left for the use of the lesser Black-backed and the Herring Gull. Two distinct species scarcely ever breed close by the side of each other*."

The first-named of these birds is the most numerous; they sit in crowded rows side by side on the narrow shelves, each bird in an upright position, with its single egg between its feet, to which its attachment is so great, that it will allow itself to be approached, and even knocked on the head rather than forsake it. The egg is remarkable in its form; the narrow end being drawn out to a blunt point; it is

* Yarrell.

handsomely marked, and is by no means disagreeable to the taste; though the white, when boiled, never assumes any other than a semi-transparent appearance, and a jelly-like consistence. Mr. Waterton was assured that when the young Guillemot attains a certain stage of growth, it contrives to climb on the back of its parent, by whom it is conveyed down to the sea. And this he thinks confirmed by what he observed; for having carried a good telescope with him, he saw through it numbers of young Guillemots diving and sporting on the sea, but quite unable to fly; and he observed others on the ledges of the rocks, as he went down among them, in such situations, that, had they attempted to fall into the waves beneath, they would have been killed by striking against the projecting points of the intervening sharp and rugged rocks.

To obtain the eggs and young of these and similar birds, or the soft downy feathers with which they are profusely clad, the daring islanders expose themselves to the most perilous situations. Sometimes a strong stake or a bar of iron is firmly driven into the ground, or into some fissure at the summit, to which a rope is attached with a cross bar at the end. On this precarious seat the adventurer sits, holding the rope with his hands, while he is gradually

lowered by a comrade above. Perhaps he has descended to a depth twice as great as that from the ball of St. Paul's to the street, the long line swaying about in the wind, and he dangling at the end. Yet still he sits, cautious but fearless ; he does not lose his presence of mind a moment ; his feet are ever ready to push against the projecting points of rock, and his eye is vigilantly glancing here and there, exploring the cliffs as he passes them, and watching the motions of the birds that sit in rows beneath. Now he has reached a well-tenanted ledge ; he gives a known signal to his friends above, by shaking the line, and lands himself on the narrow and perilous shelf. If his object is to collect eggs, he shouts and scares away the birds, that he may the more conveniently take possession of their eggs, which he rapidly deposits in a large bag attached to the line ; but if the collection of the birds themselves be his purpose, he proceeds as silently as possible, to knock each on the head with a stout stick which he carries. Having secured his booty here, he again mounts his airy seat, and descends to another ledge, placing his feet at intervals against a projection, and taking occasion to dart out to a distance of many fathoms, that he may obtain a more comprehensive, though but a momentary, glance of the vicinity in which he is.

Sometimes he arrives opposite the mouth of a cavern, a situation usually well tenanted by the sea-fowls; this he can reach only by swinging himself far under the overhanging brow, till his feet can touch the rocky floor. Then disengaging himself from his rope, which he either fastens or holds in one hand, he takes advantage of his position to collect his booty. When his load is complete, he is dragged up, at a signal, by his companions above.

Besides the perils, which are obvious in such a situation, of falling from his uncertain seat, or being dashed against the sharp projecting points of rock, there are also those arising from the liability of the rope to wear through by the friction of the edge, the chance that those above may not be able to support or to draw up the adventurous man, and the descent of fragments of rock dislodged by the action of the line. To defend himself from the last, the fowler commonly wears a well-padded cap, but occasionally large masses descend and dash him to atoms.

When the chief congregations of birds are at a comparatively low elevation, or when other circumstances render the descent from above unadvisable, the attempt is sometimes made from beneath. Advantage is taken of calm weather and a smooth sea, when three or four man a boat,

and row to the base of the rock which is to be the scene of the expedition. Arrived at the spot, one of the most daring having fastened a line around his body, attempts to climb the rugged ascent, a feat which those who have ever been in a boat among rocks, and know the dashing and grinding produced by the swell, in even the most propitious weather, will be able to appreciate. He is in some measure supported by a pole, with which they in the boat thrust him upwards, and thus he scrambles on, until he attains a ledge on which he can firmly stand. "He now, by means of the rope, brings up one of the boat's crew; the rest are drawn up in the same manner, and each is furnished with his rope and fowling-staff. They then continue their progress upwards in the same manner, till they arrive at the region of the birds; and wander about the face of the cliffs in search of them. They then act in pairs; one fastens himself to the end of his associate's rope; and in places where birds have nestled beneath his footing, he permits himself to be lowered down, depending for his security on the strength of his companion, who has to haul him up again; but it sometimes happens that the person above is overpowered by the weight, and both inevitably perish. They sling the fowl into the boat, which attends their

Northern Diver

and Great Northern Puffin



motions and reeeives the booty. They often pass seven or eight days in this tremendous employ, and lodge in the crannies which they find in the faee of the preeipice."

We will now proeed to deseribe these, and kindred birds of the order *Natutores*; which are arranged under the families *Colymbidæ*, *Alcadæ*, *Pelecanidæ*, and *Laridæ*, the most truly marine of our swimming birds.

PODICEPS.

Gen. Char. Beak moderately long, straight, compressed, pointed; nostrils perforate; wings very short and hollow; tail wanting; legs set far behind, much compressed, serrated at the hind edge; toes much flattened, outer one longest, each bordered with an oval membrane.

PODICEPS CRISTATUS. *The Crested Grebe.* (Plate XI.) Length twenty-one inches; the head furnished with two lengthened tufts, and the neek with a eopious ruff or tippet; crown deep brown; ruff ehestnut, darker at the margin; cheeks and face white; upper parts dark brown; secondaries white; throat and under parts satiny white, tinged with red on the flanks; eyes erimson; legs and feet green.

The life of the Grebes is almost exclusively spent on the

water, and their facility of motion in that element is very great, both by swimming and diving; and their quickness of sight is so great that it is with much difficulty that they can be shot. They fly poorly and reluctantly. In the broad fresh waters of our flat counties, this, which is the largest and handsomest of our Grebes, is a constant resident. It feeds on fishes.

PODICEPS MINOR. *The Little Grebe.* Length nine inches; upper parts black; secondaries white; chin black; sides and front of the neck rust-red; under parts white, of a satin-like lustre. In the winter the upper parts are brown; the chin is white; and the throat and neck ashy brown.

This little bird is common in our ponds and rivers; diving at the slightest alarm, and swimming far beneath the water. Its eggs are laid in a large nest, formed of coarse herbage heaped together, and placed at the margin of the water. Two or three other species are named as British, but they are too rare to need mention here.

COLYMBUS.

Gen. Char. Beak rather lengthened, strong, straight, compressed, pointed; wings short, stiff, pointed; tail short and

rounded; feet large, toes webbed, the outer two longest, the claws flat.

COLYMBUS GLACIALIS. *The Great Northern Diver.*
(Plate XI.) Length about thirty-two inches; beak black; head and neck black, glossed with green and purple; front of the neck marked with two half collars of white striped with black; the upper part of the breast is similarly striped; whole upper parts black, with transverse rows of square white spots, arranged in beautiful regularity, largest on the tertials; under parts pure silky white.

This fine bird is chiefly an inhabitant of our northern shores, living on the open sea, where it feeds on herrings and other fishes; but at the nuptial season it comes up the bays, and estuaries, and rocky lochs, to breed. Its powers of swimming and diving are wonderful; but on land its motions are awkward.

URIA.

Gen. Char. Beak straight, compressed, and pointed, the tip slightly notched; nostrils partly covered by a feathered skin; wings short, pointed; feet placed far behind; toes webbed; hind toe wanting.

URIA TROILE. *The Common Guillemot.* (Plate XI.) Length eighteen inches; head, neck, and upper parts generally smoky black; tips of the secondaries white; under parts pure white; beak and feet black. In winter the cheeks, chin, and throat are white.

The Guillemots breed in thousands on the rocky ledges of our precipitous sea-coasts; their single egg, laid on the bare rock, on which the female broods in an upright posture, is of very large size, and almost conical in form, the small end being very taper: scarcely two eggs are found to agree in their markings, but the most common colour is clear bluish-green, blotched with dark brown.

URIA GRYLLE. *The Black Guillemot.* Length fourteen inches; whole plumage dull black, except the middle and greater coverts, which, being white, form a large patch of that colour on the wing; the legs and feet are scarlet.

This species lays two eggs, and rather prefers caves to open ledges for breeding stations. It is not numerous anywhere.

MERGULUS.

Gen. Char. Beak short, thick, high at the base, arching to a point; both mandibles notched; wings and feet nearly as in the Guillemots.

MERGULUS ALLE. *The Little Auk.* Length about eight inches; upper parts black; under parts white; a white spot over the eye; the chin and throat are black in summer, but change to white in winter; the secondaries are tipped, and the tertials margined, with white; beak black; feet yellowish.

The Rotche, as this species is provincially called, does not breed on our shores, but is occasionally seen in winter, driven in by the violence of the winds, from the wilderness of dreary ocean on which it delights to dwell.

FRATERCULA.

Gen. Char. Beak as high as the whole head, triangular, and much compressed, furrowed with oblique grooves, a naked skin surrounding the gape; wings short, narrow, and pointed; tail short; feet very far behind.

FRATERCULA ARCTICA. *The Puffin.* (Plate XI.) Length twelve inches; beak variegated with blue, red, and yellow; eyes grey; eyelids, legs and feet orange; whole upper parts black, which also runs round the neck in a collar; sides of the head, face, throat, and under parts pure white.

The Puffin or Coulter-neb associates in considerable numbers on sea-rocks, breeding either in the crevices and holes of their sides, or in burrows excavated in the earth at their summits. Mr. Selby informs us that the burrow extends to a depth of three feet, and is dug chiefly by the males, who are so intent upon their work as to allow themselves to be taken by the hand. During incubation also, he observes: "I have frequently obtained specimens by thrusting my arm into the burrow, though at the risk of receiving a severe bite from the powerful and sharp bill of the old bird." A single white egg, as large as a pullet's, is laid in the end of this burrow, upon the earth, which is hatched about the end of June. The Puffin is only a summer visitant to our shores.

ALCA.

Gen. Char. Beak very large, high, compressed and furrowed;

- 1 Sandwich Tern
- 2 Willet - Petrel
- 3 Green Cormorant
- 4 Black-headed Gull



tip much hooked; plumage of the face running forward on the mandibles; wings, tail, and legs short.

ALCA TORDA. *The Razor-billed Auk.* Length seventeen inches; beak black with a white streak; head, neck, throat, and whole upper parts black; the secondaries tipped with white; whole under parts pure white; feet black. Young birds have the beak comparatively small, and unfurrowed.

Wherever the coast is precipitous, this species is found in abundance, from the isles of Scotland to the coasts of Cornwall; it exceedingly resembles in appearance and habits the Guillemots with which it associates; its egg, however, is more oval, and its colour is white, spotted with different shades of brown.

PHALACROCORAX.

Gen. Char. Beak long, straight, terminating in an abrupt and powerful hook; base merging into the naked skin of the face and throat; nostrils concealed; wings moderate; feet placed behind; four toes, all connected by webs, outmost toe longest, and diminishing inwardly.

PHALACROCORAX CARBO. *The Cormorant.* (Plate XII.) Length three feet; eyes pale green; beak brown; feet

black; general plumage glossy black; the sides of the head and neck show many white bristles intermingled; and the feathers of the back and wings are bronzed, each with a broad margin of deep black; a large patch of pure white on each flank. In the spring and summer the feathers of the hind-head are lengthened into a falling crest, but this is not found in winter.

The Cormorant is generally distributed over our coasts, and is well known as an expert and indefatigable fisher. It is frequently seen sitting on a post or an overhanging branch of a tree, watching for a passing fish, on which it drops without noise or splash, but with unerring accuracy. "A Cormorant has been seen to pick up an eel from the mud, return to the rail he was previously sitting upon, strike the eel three or four hard blows against the rail, toss it up into the air, and catching it by the head in its fall, swallow it in an instant." (Yarrell.)

PHALACROCORAX CRISTATUS. *The Shag.* Length twenty-seven inches; naked skin of the face and the eyes green; general plumage rich, deep, glossy green; the feathers of the back and wing-coverts margined with deep black; wing-quills and tail dull black; head crested in summer.

The manners of this bird are almost identical with those

of the preceding; it is, however, rather less numerous. Both species build nests of sea-weed on the ledges of the rocks, many together; and their eggs are oval, pale blue, covered with a chalky deposit.

SULA.

Gen. Char. Beak long, strong, stout and broad at the base, tapering to a point, which is not hooked; edges of the mandibles notched; gape very wide; face naked; wings long, pointed; tail wedge-shaped; feet as in the Cormorants.

SULA BASSANA. *The Gannet.* Length thirty-four inches; face and beak bluish-grey; eyes pale yellow; head and neck buff; wing-primaries black; all the rest of the plumage white. The young bird is blackish, mottled all over with lines and spots of whitish.

On the isolated rock on the east coast of Scotland, known as the Bass, and on a few other similar stations scattered round our shores, the Gannet breeds in immense numbers, and the produce of these spots, in eggs, young, and feathers, yields no inconsiderable source of profit to the hardy fishermen who procure them. In winter the species forsakes our coasts.

STERNA.

Gen. Char. Beak long, nearly straight, compressed, pointed; the mandibles equal in length; nostrils perforated, placed near the middle of the mandible; wings excessively long and pointed; tail forked; legs and feet small and weak; three front toes webbed, the hind toe free.

STERNA CANTIACA. *The Sandwich Tern.* (Plate XII.) Length fifteen inehes; crown and hind-head blaek, deseending in a pendent pointed erest; neek and faee white; upper parts ashy-grey, the quills darker with pale tips; rump and tail and whole under parts pure white, in some speeimens tinged with rosy; beak and feet blaek.

The Terns are a numerous genus, and the habits of all are pretty mueh the same. They are birds of slender and elegant form, and powerful and graeful motions; their long pointed wings, and deeply forked tail, eombine with their aetions on the wing, to give them the appearance of Swallows; and henee the common name of Sea-swallows everywhere given to them. Notwithstanding their webbed feet they are rarely seen to swim, but seem to remain upon the wing all day long, occasionally resting on some buoy, or other floating objeet. Fishes eonstitute their sole food, in

procuring which they descend with a perpendicular plunge, and immediately emerge again into the air. This species principally feeds on the sand-launce and gar-fish. The nests are made in great numbers together, either on shingle beaches or on the ledges of rocks.

STERNA DOUGALLII. *The Roseate Tern.* Length fifteen inches; beak black at the tip, red at the base; crown black; face and neck white; whole upper parts ashy-grey; under parts white, delicately flushed with rose-colour; legs and feet red; tail very long and forked.

Like our other Terns, this is a summer visitant to these coasts, but not a common one.

STERNA HIRUNDO. *The Common Tern.* Length fourteen inches; beak bright red, with the tip black; legs and feet also red; crown and hind-head black; upper parts pearl-grey; tail-coverts white; outer edge of first primary dark-grey; under parts dull white.

Breeds on marshes, or on the flat sandy margins of the sea.

STERNA ARCTICA. *The Arctic Tern.* Length fifteen inches; beak red, with the point sometimes black; legs and feet orange; crown and hind-head black; upper parts pearl-grey; edge of first primary dark-grey; under parts the

same grey hue as the back. This species has been confounded with the preceding, with which it associates; the hue of the under parts is, however, sufficient to distinguish them.

On some occasions these birds have been seen assembled in immense numbers; in the northern and western isles of Scotland this is the most common species of Tern.

STERNA MINUTA. *The Lesser Tern.* Length eight inches; beak, legs, and feet orange, the former tipped with black; forehead white; crown and hind-head black; back and wings pearl-grey; first three primaries slate-grey; rump and tail, chin, throat, and whole under parts pure white.

This delicate little bird is the smallest species of the genus we have; and during summer it is pretty generally distributed around the shores of England. It lays two or three eggs in May, on the bare ground near the sea.

STERNA NIGRA. *The Black Tern.* Length nearly ten inches; beak black; legs and feet reddish-black; general plumage deep blackish-grey, taking a bluer tinge on the back, wings, and tail; vent and under tail-coverts white. In winter the forehead, cheeks, chin, and throat become white. The webs of the feet in this species are deeply scalloped out.

It is much less marine in its habits than its fellows, resorting chiefly to inland marshes, rivers, and lakes. Its eggs, which are deposited in the low grounds near such situations, are of a dark olive hue, blotched with black. It feeds largely on insects as well as fishes.

LARUS.

Gen. Char. Beak strong, compressed, with a cutting edge; upper mandible slightly curved to the point, lower with a strong angle beneath; wings rather less long and pointed than in the Terns; feet stronger; tail even, or but slightly forked.

LARUS RIDIBUNDUS. *The Black-headed Gull.* (Plate XII.) Length sixteen inches; beak, legs, and feet scarlet; whole head deep brown; neck pure white; back and wings pearl-grey, the latter tipped with black; tail and its coverts, and the whole under parts pure white.

A very common species, which remains with us all the year; scattered over the sea-coast during winter, but in the spring associating in immense flocks, which resort to some inland marsh, selected from year to year as a breeding-place.

The eggs in such places are collected for the table by many thousands.

LARUS TRIDACTYLUS. *The Kittiwake Gull.* Length fifteen inches and a half; beak yellowish; head, neck, tail-coverts, and tail, and whole under parts pure white; back and wings pearl-grey; wings tipped with black; feet dusky greenish; hind toe only a rudiment.

The Kittiwake, so called from its cry, is very common, and many remain with us the whole year, though others depart for southern climes after the breeding season. It forms its nest on the lofty ledges of cliffs, and lays three eggs of a pale brown hue, splashed with different shades of ashy and brown. Its food consists of small fishes, spawn, and crustacea.

LARUS CANUS. *The Common Gull.* Length eighteen inches; beak, legs, and feet greenish-grey; eyelids scarlet; plumage scarcely differing from the last; hind toe small, but well developed. In winter, the head and the sides and back of the neck are speckled and streaked with greenish-brown.

A well-known species, which roams far into the inland parts of the country, and may be seen following the plough for grubs, or feeding on the fallows and commons, but

winging its way back to the seaside at night. It feeds also in the shallows of tide-waters, on the bars at the mouths of rivers, and along the edges of lakes or streams after floods, picking up many aquatic substances as well as fishes. It breeds in inland marshes, and also upon bold seaward cliffs.

LARUS ARGENTATUS. *The Herring Gull.* Length twenty-four inches; beak yellow; the under mandible tinged with red; eyes pale yellow; eyelids orange; legs and feet flesh-coloured; head, neck, rump, tail, and whole lower parts pure white; back and wings pale grey; tips of the latter black.

Around the southern coast of the British Islands this fine Gull is rather common, but further north it is replaced by other species. It builds a coarse nest of grass and seaweed on the top and shelves of precipices, and lays three eggs, of an olive colour, spotted with brown. It feeds chiefly on marine fishes. In 1832, one of these Gulls struck the lantern of the Bell Rock Lighthouse with such force, that two of the plates of glass, measuring two feet square, and a quarter of an inch in thickness, were shivered to pieces, and scattered over the floor in a thousand atoms, to the great alarm of the keeper on watch, and other inmates

of the house, who rushed instantly into the light-room. The Gull was found to measure five feet between the tips of his wings. In his gullet was a large herring, and in his throat a piece of plate-glass an inch in length.

We have several other species of Gull, occasionally seen on our shores, but too rarely to need description in our pages.

LESTRIS.

Gen. Char. Beak strong, stout and cutting, compressed, hooked at the tip; the base enveloped in a cere; nostrils placed near the tip, diagonal, narrow, perforated; legs and feet long and powerful; claws strong and much hooked.

LESTRIS PARASITICUS. *The Arctic Skua.* Length twenty inches; whole plumage greyish-brown, darker above; the edges and bend of the wing white; the sides of the neck tinged with gall-yellow.

This bird is more bold and fierce than the true Gulls, and in its tyrannical disposition and power may be considered as bearing to them the same relation which the Bald Eagle of America bears to the Fish-hawk. "It rarely takes the trouble to fish for itself, but watching the Gulls, while thus employed, no sooner observes one to have been

successful than it immediately gives chase, pursuing it with fury, and obliging it, from fright, to disgorge the recently swallowed fish, the Skua descends after it to catch it, and is frequently so rapid and certain in its movements and aim as to seize the prize before it reaches the water." (Yarrell.) The Skua however does not hesitate to kill small birds and devour *them* also. The present is the only numerous species found on our coast.

PUFFINUS.

Gen. Char. Beak rather slender, long, straight, compressed, both mandibles hooked downward at the tip; nostrils opening by two distinct tubes; wings long, pointed; legs compressed; front toe webbed; hind toe a mere rudimentary claw.

PUFFINUS ANGLORUM. *The Manx Shearwater.* Length fourteen inches; whole upper parts smoky black; chin, throat, and under parts white; sides of the neck marked with transverse bars of grey; a spot of brown on the flanks; beak and feet blackish.

Formerly this bird bred abundantly on the Isle of Man, but at present it is chiefly known around the south-western extremity of England, and particularly the Scilly Islands,

whose sandy soil produces a crop of short fern. Under the shelter of this cover, the Shearwater burrows in hundreds, each pair producing but a single egg. The birds remain all day in their holes, but at night come out and congregate on the sea, to feed on fish, crustacea, etc.

THALASSIDROMA.

Gen. Char. Beak short, much compressed before the nostrils; tips of both mandibles abruptly hooked; nostrils tubular, terminating in one opening; wings long, pointed; tail square or slightly forked; legs long and slender; toes webbed; hind toe reduced to a small pendent nail.

THALASSIDROMA PELAGICA. *The Storm Petrel.* (Plate XII.) Length six inches; general plumage smoky black; but the rump and vent, and the outer edges of the tertials, are white.

The habits of these small web-footed birds are eminently oceanic; and it is only by accident that a specimen is ever blown upon our shores. They course upon untiring wing, over the crests and hollows of the ocean-waves, hundreds of miles from land, and resort to ships, to pick up any matters of an oily nature that may be thrown overboard. In some

of the outmost rocks, however, that form the Atlantic barrier of these islands, the Storm Petrel is said to breed, nestling in crevices. When the living bird is handled, it vomits a quantity of pure oil, which is carefully preserved by the fishermen. A superstitious dislike to these little birds is very prevalent among mariners, who foolishly attribute to them a preternatural influence in the production of storms ; and hence several absurd names have been given to them, which it is not worth while to repeat. Though commonly seen in stormy weather, the Petrels do not appear more numerous at such times than in calms.

CHAPTER VIII.

AUGUST.

THOUGH the heat of the summer sun seems scarcely to have at all diminished, yet some of our summer visitants have already bidden us farewell, on their autumnal migration. The Swift is the earliest to leave; sometimes even before July has filled its course, this bird of powerful wing tires of his island residence, and departs to sunnier skies; by the first week or ten days of August, the great body of the species almost invariably has departed; and it is a rare sight to see a straggler after the 20th of this month.

On the other hand, our other *Hirundinidæ*, the Swallow and Martins, remain long after this period, lingering on through our mellow autumn, never retiring until the setting

in of October, and sometimes reluctantly driven away only by the cold fogs of November. Then indeed,

“ When Autumn scatters his departing gleams,
Warn’d of approaching Winter, gather’d play
The Swallow-people; and toss’d wide around,
O’er the calm sky, in convolutions swift,
The feather’d eddy floats: rejoicing once,
Ere to their wintry slumbers they retire:
In clusters elung, beneath the mouldering bank,
And where, unpierced by frost, the cavern sweats.
Or rather into warmer climes convey’d,
With other kindred birds of season there
They twitter cheerfnl till the vernal months
Invite them welcome back: for, thronging, now
Innumerable wings are in eommotion all.”—THOMSON.

The hypothesis, which the poet here first suggests, of the retirement into caves and holes of our summer visitants, in order to pass the winter in a state of torpidity, he properly dismisses for the theory of migration, which abundant observation has shown to be consonant with fact. About the middle of the last century, many naturalists of eminence were disposed to believce that the Swallow tribe, in particular, hid themselves in holes and crannies, or that they even went beneath the water, and remained clustered to-

gether in insensibility, like frogs and toads, under the mud of the bottom. In White's Natural History of Selborne we find many allusions to this subject, which seems to have occupied much of his thoughts. Thus he tells us of an inquisitive clergyman who had assured him, that in his youth, some workmen, in pulling down the battlements of a church tower, early in the spring, found two or three Swifts among the rubbish, which were, to all appearance, dead; but on being carried towards the fire, revived. He put them, in the excess of his care to preserve them, into a paper bag, and hung them by the kitchen fire, where they were suffocated.

No doubt now exists in the mind of any naturalists that the great body of these birds, as well as other species that appear only in the summer, migrate on the wing to other countries; perhaps not performing their whole journey at one effort, but taking an irregular course, only keeping the general southward direction; so that at no part of their migration, from the north of Europe to tropical Africa, would the birds of feeblest wing be necessitated to perform a continuous flight of more than a few hours' duration. The Mediterranean could be crossed at many points, by a flight not much exceeding a hundred miles from land to

land, and twenty miles an hour is a rate of speed that could probably be maintained by the feeblest of our Warblers. To the Swift, however, whose coursings and doublings, if they could be measured, would doubtless extend to many hundreds of miles every day of its life, this migration could present no difficulty. At the same time, it is quite probable that late-hatched young, or sickly birds, might be overtaken by cold weather, before they could effect their departure from our shores, and might occasionally be found benumbed and inactive in the depth of winter. Yet, on such a supposition, it is very hard to imagine how existence could be sustained without food, the taking of which requires the powers of active flight, for many months, except by the influence of torpidity, which suspends, as we know, to a great extent the exercise of the organic functions. It would be of the highest importance and interest, if any one fortunate enough to find Swallows or Swifts in such circumstances, during winter, would, as Mr. Jenyns suggests, leave them unmolested, and watch them from time to time, the more frequently as spring advanced, to see whether they would resume their former activity.

An experiment, instituted by Dr. Jenner, shows in a very interesting manner the attachment which the Swift bears to

a certain locality, and renders it probable that all our migrant birds may return year after year to the local scenes where they were born and bred. "It is a remarkable fact," he observes, "that the Swallow tribe, and probably many other birds, which absent themselves at stated periods, should return annually to the same spot to build their nests. The Swift, which for nine months has some distant region to roam in, was selected for the purpose of an experiment to ascertain this with precision. At a farm house in Gloucestershire, I procured several Swifts, and by taking off two claws from the foot of twelve, I fixed upon them an indelible mark. The year following, their nesting-places were examined in an evening when they had retired to roost, and there I found several of the marked birds. The second and third years a similar search was made, and did not fail to produce some of those which were marked. I now ceased to make an annual search, but at the expiration of seven years, a cat was seen to bring a bird into the farmer's kitchen, and this also proved to be one of those marked for the experiment."

There is, perhaps, none of our birds, certainly none of our common birds, that can be compared for power and rapidity of flight with the Swift. It is abroad at earliest

day, and does not retire in the height of summer till after nine in the evening, so that its period of activity is not less than seventeen hours. And when we consider that it is on the wing for the whole of that time, circling high in air, dashing through the low arches of the bridge, wheeling around the summit of a building, sweeping over the surface of a pond, or rushing in its arrowy course past the beholder with the swiftness of a meteor, we shall be lost in admiration of its power of wing. It is playful in its flight: on bright and warm mornings, little parties may be seen dashing round steeples and towers, and, as they approach a certain part, uttering a loud squeak; these are supposed to be males, saluting their mates as they pass the erevices, where the latter are engaged in their weary office of incubation; for it has been remarked that as they pass the erevices and squeak, their speed perceptibly slackens, and at the same time an answering voice is heard from within, uttering a little soft note of complacency.

The poetical language in which Sir Humphry Davy has expressed his admiration of the Swallow tribe is peculiarly appropriate to the Swift. "The Swallow," observes this lover of nature, "is one of my favourite birds, and a rival of the Nightingale, for he chears my sense of seeing as

much as the other does my sense of hearing. He is the glad prophet of the year; the harbinger of the best season; he lives a life of enjoyment among the loveliest forms of nature; winter is unknown to him; and he leaves the green meadows of England in autumn, for the myrtle and orange groves of Italy, and for the palms of Africia; he has always objects of pursuit, and his success is secure. Even the beings selected for his prey are poetical, beautiful, and transient. The *Ephemerae* are saved by his means from a slow and lingering death in the evening, and killed in a moment, when they have known nothing but pleasure. He is the constant destroyer of insects, the friend of man, and may be regarded as a sacred bird. His instinct, which gives him his appointed season, and teaches him when and where to move, may be regarded as flowing from a Divine source; and he belongs to the oracles of nature, which speak the awful and intelligible language of a present Deity."

About the latter part of this month the different species of Plovers appear in larger flocks than before, for the numbers are increased by the families of young that are now fully fledged and able to accompany their parents. The beautiful Golden Plover, having associated in large assemblages,

begins to leave the wild moors, and to descend upon the corn-fields newly sown, and fallow lands, where the larvæ of various insects, earthworms, and slugs, which constitute its favourite food, are to be found in abundance. Here they soon become exceedingly fat, and in this condition they are much esteemed for the table, their flesh assuming a delicacy of flavour in nowise inferior to that of the Woodcock. When disturbed or alarmed, the flocks mount into the air a few yards high, and wheel round and round in large circles above the head of the intruder, uttering a loud and shrill whistle, and after performing several such rapid evolutions, frequently settle again near the spot whence they arose. They often, however, squat close to the ground, as if hoping to escape observation, by lying perfectly still; and often the flock disperses by running over the ground, in different directions, in which they display great swiftness of foot.

The Dotterels, which during the summer had inhabited as breeding stations the lofty mountains of Cumberland and Westmoreland, are now congregating in flocks for the purpose of leaving this country. In our old writers this bird has but a sorry reputation for wit, as it is asserted to imitate all the actions of the fowler, until it falls a victim to its simplicity. Thus Drayton speaks of

"The Dotterel, which we think a very dainty dish,
Whose taking makes such sport as no man more can wish ;
For as you creep, or cower, or lie, or stoop, or go,
So marking you with care, the apish bird doth do,
And acting everything, doth never mark the net,
Till he be in the snare which men for him have set."

That the imitative propensities of the bird were exaggerated cannot be doubted, but that there was more ground for the imputation of simplicity than some naturalists have been willing to allow, appears from some interesting observations on this rare, or rather local bird, by Mr. Heysham. "Having spent," observes this gentleman, "the considerable portion of several days on the Robinson mountain, in company with a very able assistant, searching for the eggs of the Dotterel, I had of course ample opportunities of observing their manners; and I flatter myself that the following particulars will be interesting to some of my ornithological readers. On the 3rd of July we found three or four pair near the most elevated part of this mountain; and on all our visits thither, whether early in the morning or late in the afternoon, the greater part were always seen near the same place, sitting on the ground. When first discovered, they permitted us to approach within a short distance, without showing any symptoms of alarm;



1 Bustard

2 Lapwing

3 Oyster-catcher

and frequently afterwards, when within a few paces, watching their movements, some would move slowly about, and pick up an insect, others would remain motionless, now and then stretching out their wings, and a few would occasionally toy with each other, at the same time uttering a few low notes, which had some resemblance to those of the common Linnet. In short, they appeared to be so very indifferent with regard to our presence, that at last my assistant could not avoid exclaiming, 'What stupid birds these are!' The female that had young, nevertheless, evinced considerable anxiety for their safety, whenever we came near the place where they were concealed, and, as long as we remained in the vicinity, constantly flew to and fro above us, uttering her note of alarm."

Towards the end of the present month other species of *Charadriidae* appear on our flat shores, with their numerous young broods, as the Grey Plover (*Squatarola cinerea*), the Turnstone (*Strepsilas interpres*), the Sanderling (*Calidris arenaria*), and others, some of which have migrated from northern countries, and some from their breeding stations inland. They run swiftly on the shore, feeding along the margin of the tide on minute shrimps and other *crustacea*, as well as small bivalve *mollusca*. In their feeding, they

mix freely together, and associate also with the Sandpipers and Godwits, but in flying each species generally forms its own flock. Their cries, mostly uttered on the wing, though distinguishable, much resemble each other, are loud, shrill, and whistling, and have a somewhat plaintive character.

The British species of *Hirundinidae* and *Charadriidae* we now proceed to describe.

HIRUNDO.

Gen. Char. Beak short, depressed, the margins not inflected; gape without bristles; wings long and pointed; tail usually forked; toes placed three before and one behind; lateral toes equal.

HIRUNDO RUSTICA. *The Chimney Swallow.* Length eight inches and a half, five of which belong to the tail; forehead, chin, and throat chestnut; whole upper parts glossy blue; wing-quills and tail black; a band of blue-black across the breast; under parts rusty-white.

No bird is better known, both in city and country, than the Swallow, the constant companion of warm and fine weather. Early in April he arrives with us, and remains until the middle of October. The swiftness of his arrowy

course, as he rushes through a narrow street, or plays over the glassy pool, thinning the swarms of dancing flies, is extraordinary.

HIRUNDO URBICA. *The Martin.* Length five inehes and a half; upper parts glossy blaek, except the rump, whieh is pure white; whole under parts also white; the wings and tail have little gloss.

The Martin confidingly placees his domestie economy under the care of man, building his simple chamber of mud beneath the eaves of our houses and in the corners of our windows. He appears a few days later than the Swallow.

HIRUNDO RIPARIA. *The Sand-Martin.* Length less than five inehes; upper parts mouse-brown; wings and tail deeper brown; under parts pure white, except a band of brown aeross the breast.

This little speeies, whieh is the earliest of its genus in its migrations, dwells in colonies, whieh excavate for themselves holes in cliffs and sand-banks. At the extremity of each burrow, whieh reaches horizontally to the depth of two feet, a nest of grass, lined with soft feathers, is the scene of the Sand-Martin's family economy.

CYPSELUS.

Gen. Char. Wings excessively long and narrow; legs thickly feathered; all the four toes pointing forwards; claws short, strong and much curved; tail slightly forked or nearly even.

CYPSELUS APUS. *The Swift.* (Plate IX.) Length seven inches; whole plumage sooty-black, except the chin, which is white.

Almost all the functions of life, except sleeping and incubation, are performed by this bird upon the wing. It rests by clinging with its strong hooked claws to the face of some perpendicular wall or rock; breeds in holes in steeples or other lofty buildings, and lays two pure white eggs.

It arrives early in May, and leaves our shores by the middle of August, though individuals may occasionally be seen later.

OTIS.

Gen. Char. Beak straight, depressed at the base, the point curved down; nostrils open; wings long and powerful; legs long, naked above the heel; toes short; hind toe wanting.

OTIS TARDA. *The Great Bustard.* (Plate XIII.) Length forty-five inches, height about thirty-two; head and neck bluish-grey; a tuft of loose and slender feathers of a paler grey descends on each side of the throat; upper parts pale reddish-buff, barred with black: wing-coverts and tertials white; quills black; tail buff, becoming pale at the edges, barred with black and tipped with white; under parts pure white; legs and feet brown. The female is smaller, and destitute of the cheek-plumes.

This noblest of native British birds, which formerly was of rather frequent occurrence in favourable situations, seems to be now nearly extinct. Extensive plains and downs, where the view for miles is uninterrupted, are its favourite localities, over which its long legs enable it to course with surprising fleetness, rarely taking wing, though capable of powerful flight. The female lays her eggs on the ground. Vegetables, seeds, and small animals constitute the Bustard's food.

CEDICNEMUS.

Gen. Char. Beak stout, straight, depressed at the base, ridged above; tip compressed: under mandible with an angle; a wide nasal furrow covered with a membrane; nostrils pierced

in the middle of the beak, perforate; legs long, slender; toes connected and fringed with membrane, hind toe wanting.

ŒDICNEMUS CREPITANS. *The Thick-knee.* Length seventeen inches; general hue brownish-buff, each feather having a central streak of dark-brown; a pale band passes beneath the eye, and under this is a brown streak; wing-quills blackish; tail feathers mottled at their base, white in the middle, and black at the tips; the under parts are paler, almost white on the throat and on the belly; eyes very large, and rich yellow; legs and feet yellow.

In open plains, sheep-downs, and extensive fallows, the Thick-knee is most numerous; in Norfolk in particular it abounds; during the night its shrill whistle is often heard, startling the traveller. It has many of the habits of the Bustard; its eggs, as large as those of a hen, and of a pale buff spotted with blue and brown, are laid on the bare ground.

CHARADRIUS.

Gen. Char. Beak straight, compressed, shorter than the head; tip hard, curved, and pointed; nasal groove two-thirds the whole length; nostrils linear, in the midst of the covering membrane; wings long, pointed; outer and middle toe connected; hind toe wanting.

CHARADRIUS PLUVIALIS. *The Golden Plover.* Length eleven inches; upper parts sooty black, marked with large spots of golden yellow; sides of the head, neck, and breast varied with ashy-brown and yellowish spots; wing-quills black, the shafts white towards the tips; throat and lower parts white; this is the winter plumage. In the nuptial dress, the black of the upper parts is studded over with small spots of rich yellow; face and streak above the eye white, sides of the neck white with great black and yellow spots; whole under parts deep black.

This beautiful bird breeds among the moors and hills of our northern counties, laying four eggs of a cream-colour, spotted with black; its call is a shrill plaintive whistle, uttered as the bird wheels round and round on swift wing, above the scene of its anxieties. The manners of the Plovers, generally, are all much alike; they feed on worms, insects, and slugs; associate in large flocks, except when breeding; are vigilant and noisy, are powerful in flight, yet frequently slower to avoid notice; frequent open, stony plains; are subject to periodical changes of plumage, and are very highly esteemed for the delicacy and flavour of their flesh.

CHARADRIUS MORINELLUS. *The Dotterel.* Length about nine inches; face and line over the eye white; crown and

hind-head blackish ; nape and sides of the neck ash-colour ; back and wings ashy, bordered with rusty ; quills dusky ; tail ashy, tipped with white ; across the breast a band of white, edged above and below with black ; breast below this rich rust-red, passing into chestnut ; middle belly black ; vent and under tail-coverts buff-white. In winter the under parts are white.

This is a spring visitor with us, breeding on the mountain moors of the north.

CHARADRIUS HIATICULA. *The Ring Plover.* Length seven inches and a half; beak orange, with a black tip; forehead white, surmounted by a black band; crown and nape hair-brown; cheeks and ear-coverts black; all round the neck a white collar, and below it a black one; upper parts hair-brown; the coverts tipped with white; the tail, except the middle feathers, tipped increasingly with white; under parts, except the collar, white; legs and feet orange.

Common on flat, sandy shores, especially in winter; feeding on crustacea, as well as worms and insects. It breeds in great numbers on the sandy warrens of Norfolk.

SQUATAROLA.

Gen. Char. Beak strong, cylindrical, nearly as long as the head; the horny tip about half the whole; nasal groove half the length; nostrils linear; wings pointed; legs slender; fore toes connected; hind toe very small.

SQUATAROLA CINEREA. *The Grey Plover.* Length eleven inches; forehead, crown, a stripe above the eyes, and sides of the neck white; upper parts black, each feather tipped broadly with white; tail-coverts long, banded with black and white; chin, cheeks, throat, breast, and belly deep black; sides and flanks white; beak and feet black. In winter the upper parts are ashy, mottled with dull white, the under parts white; the breast streaked with grey.

The Grey Plover does not breed with us, but appears on the coast, chiefly in small flocks, in autumn, winter, and spring.

VANELLUS.

Gen. Char. Beak shorter than the head, slightly compressed; nasal furrow wide, extending to the hard part; wings armed with a spur; the first three quills suddenly narrowed towards their tips; hind toe very small.

VANELLUS CRISTATUS. *The Lapwing.* (Plate XIII.)
Length twelve inches; crown, face, neck and breast rich, deep black, with a green gloss; from the hind-head springs an elegant crest of long black feathers, curving upwards, capable of being erected; upper parts of the body olive-green, with metallic reflections of purple and olive; the sides of the head, the base of the tail, and whole under parts pure white, except the under tail-coverts, which, as well as the upper, are chestnut; tail black.

The manners and instincts of the Lapwing do not materially differ from those of the other Plovers; but its exceeding beauty and elegance, its wild and plaintive cry of "Peewit," as it wheels over the head of an intruder on its breeding-plains, and the efforts of the female to decoy him away from her nest, have attached a pre-eminence to this species. It is very abundant in England, and its eggs are sold in great numbers in the London markets.

STREPSILAS.

Gen. Char. Beak strong, thick at the base, tapering to a point; wings long, pointed; toes four, bordered with a narrow membrane; hind toe small, touching the ground at its tip.

STREPSILAS INTERPRES. *The Turnstone.* Length nine inches and a half; forehead, eyebrows, sides of the neck, loins and rump, throat, belly, vent, and under tail-coverts pure white; crown black, the feathers having pale tips; cheeks, car-coverts, a streak from the gape downwards, the whole breast, most of the neck, and a band across the rump deep black; back, scapulars, and tertials chestnut, mottled with black; wings brownish-black, with a transverse bar, and a triangular spot of white; tail white, with a broad bar of grey; legs and feet rich orange-red.

This handsome bird, found in all parts of the world, frequents sca-beaches, and is constantly engaged in turning over small stones with its beak to procure marine insects and worms that lie beneath. During the summer it leaves our shores for more northern latitudes.

CALIDRIS.

Gen. Char. Beak straight, flexible, compressed, the tip dilated, hard and smooth; wings moderately long, pointed; toes with a very slight membrane; hind toe wanting.

CALIDRIS ARENARIA. *The Sanderling.* Length eight inches; plumage mingled in tints, the feathers of the upper

parts being blackish in the centre, with broad rusty edges and white tips; wing-coverts, quills, and tail black, the outer feathers of the latter greyish; under parts white, but studded on the throat and breast with a close pencilling of black and rusty bars; beak, legs, and feet black. In winter the upper parts are of a light ashy hue, with darker streaks, and the whole under parts white.

Common on our sandy shores, running swiftly along the water's edge, in company with the Sandpipers. It feeds on minute shrimps and marine mollusea.

HÆMATOPUS.

Gen. Char. Beak long, strong, straight, wedge-like at the tip; nostrils slit in the groove; feet strong; toes slightly connected and fringed with a membrane; hind toe wanting.

HÆMATOPUS OSTRALEGUS. *The Oyster-catcher.* (Plate XIII.) Length sixteen inches; beak and naked orbits rich orange; eyes crimson; feet purplish-red; head, neck, and upper parts generally, black; rump, and base of the tail, a band across the wings, and whole lower parts pure white. In winter there is a white gorget round the throat.

This bird, as its name implies, feeds on oysters, and

other strong bivalve shell-fish, the shells of which are opened by the wrench of its powerful beak, whose chisel-like tip it is enabled to insert, when almost closed. It is not uncommon on our rocky coasts, where it is seen to swim and dive with facility. Its eggs, which are cream-coloured, spotted with grey and brown, are deposited on the shingle of the beach, without any nest or other protection. Colonel Montagu speaks of a marshy point on the coast of Lincolnshire, where the Oyster-catcher bred in such abundance that a fisherman assured him that he had collected a bushel of eggs in a single morning. This bird is sometimes called the Sea-Pie.

CHAPTER IX.

SEPTEMBER.

THE commencement of the Partridge season on the first of this month, leads us to the smiling corn-fields of the country, where the good providence of God has covered the cultivated lands with the rich rewards of industry.

“ Attemper’d suns arise,
Sweet-beam’d, and shedding oft through lurid clouds
A pleasing calm; while broad and brown below
Extensive harvests hang the heavy head.
Rich, silent, deep, they stand; for not a gale
Rolls its light billows o’er the bending plain:
A calm of plenty! till the ruffled air
Falls from its poise, and gives the breeze to blow.
Rent is the fleeey mantle of the sky;

The clouds fly different ; and the sudden sun
By fits effulgent gilds th' illumined field,
And black by fits the shadows sweep along.
A gaily-chequer'd, heart-expanding view,
Far as the circling eye can shoot around,
Unbounded tossing in a flood of corn."—THOMSON.

In these fields, beneath the shelter of what to her is a tall waving forest of close-grown stalks, a shelter which up to this season she has found secure from intrusive feet, the Partridge has hatched her eggs, and tended her down-clad young without danger and without fear. But suddenly her domain is invaded by an army of ruthless reapers, who, laying low with rude noise and boorish mirth the protecting cover, expose many a half-grown brood, and call forth all the instinctive artifices and ingenious stratagems of the mother, which can never be witnessed without admiration. Out she rushes with a querulous cry, and tumbling over and over, often induces the irresistible impression, even in those who are familiar with the deception, that her wings or her legs are broken, and that it is an easy matter to catch her with the hand. She contrives, however, just to keep beyond the reach of her pursuer, scrambling grotesquely along, until she judges that her young, who are on

the alert, taking advantage of the maternal sagacity, have been able to make off to some place of concealment. Then suddenly her whirring wings, put into vigorous action, bear her off to some distant spot, whence making a rapid circuit on foot, she soon returns to her young charge, and adds her wits to theirs in seeking their continued safety.

But under other circumstances, the Partridge, though a timid bird, has been known to run greater risk in defence of its young. Mr. Selby, in his British Ornithology, relates the following anecdote, for the truth of which he vouches : — “A person engaged in a field had his attention arrested by some objects on the ground, which on approaching he found to be two Partridges, a male and a female, engaged in battle with a Carrion-crow : so successful and so absorbed were they in the issue of the contest, that they actually held the crow till it was seized and taken from them by the spectator of the scene. Upon search, the young birds, very lately hatched, were found concealed amongst the grass. It would appear, therefore, that the crow, a mortal enemy to all kinds of young game, in attempting to carry off one of these, had been attacked by the parent birds, and with the above singular success.”

Instances of birds removing their eggs in some way

not well understood, when they suspect danger, are not infrequent; but few are more interesting than one narrated by Mr. Jesse, of the bird of which we are speaking. It is a beautiful example of care, sagacity, and skill, prompted by affection, and brought into requisition by a sudden, and surely an unprecedented, emergency. "A gentleman living near Spilsby, in Lincolnshire, was one day riding over his farm, and superintending his men, who were ploughing a piece of fallow-land. He saw a Partridge glide off her nest, so near the foot of one of the plough-horses, that he thought the eggs must be crushed; this however was not the case, but he found that the old bird was on the very point of hatching, as several of the eggs were beginning to crack. He saw the old bird return to her nest the instant he left the spot. It was evident that the next round of the plough must bury the eggs and nest in the furrow. His astonishment, therefore, was great when, returning with the plough, he came to the spot, and saw the nest, indeed, but the eggs were gone. An idea struck him, that she had removed them; and he found her, before he left the field, sitting under the hedge upon twenty-one eggs, nineteen of which she subsequently hatched. The round of ploughing had occupied about twenty minutes,

in whieh time, probably assisted by the coek-bird, she had removed the twenty-one eggs to a distance of about forty yards."

In the dry and sunny days whieh so generally prevail in the early part of this month, the eoveys of young Partridges may be frequently seen, particulerly in the morning, rubbing themselves in the loose dusty soil; and the spots where others have been so engaged are often observed. The object of dusting, which is a praetice common to Gallinaceous birds, seems to be to obtain relief from the torture inflicted on them by numerous parasitic insects of various kinds, by whieh birds are peculiarly infested. Young and sickly birds are more than usually thus tormented, especially in warm weather. As the day wanes, the eoveys repair to some neighbouring field where the corn is yet uneut, or later in the season to the stubbles, and pick their afternoon meal of grain; after whieh, as soon as the buzzing beetles begin to take their headlong evening flights, the call-note of the Partridges is heard, and the whole move away together to the spot selecteted for the night's repose. It appears that the whole brood arrang themselves in the eentre touching each other, the tails of all being in a circle, and thus, squatting close upon the ground, they pass the night;

instinctively taught thus to guard against surprise from every quarter.

The woods, which for two or three months have become increasingly silent, are now again vocal with the songs of many birds which resume their music in autumn. The Thrush, the Blackbird, the Wood Lark, the Willow Wren, the Great Tit, and the Linnet, are among these: the Red-breast is commonly called an autumnal songster, but in reality it sings all the year round, though from the paucity of performers in the later months, so sweet and vivacious a melody as the Robin's is more distinguishable and striking than in the more copious melody of spring.

Many birds are now migrating, some only to a partial extent, as the Red-poll, which about this time leaves the northern mountainous parts of this country, where it had lived in the seclusion of the woods, and descends in flocks to the plains of our southern counties, and seeks the downy seeds of thistle-beds, and the cones of alders. The Grey Wagtail forsakes the mountain cascades of Scotland, and runs by the sides of the placid rivers and ponds of the lowlands, and around the warm spring-heads of the south. The Wheatear also now assembles in great numbers on our southern downs, yet not in flocks, hundreds arriving every

day; as many as eighty-four dozen have been caught by a shepherd in one day. Yet towards the end of this month all these vast numbers have disappeared, and are seen no more until the return of spring.

Most of our summer visitants have either left these islands for the south, or are preparing to depart by the latter end of September, including the migrant Warblers (*Sylviadæ*); and the Martins and Swallows, though they often remain until the latter part of October, yet in some seasons begin to depart in the present month, and may generally be observed making preparations for their aerial voyage. The former, congregating in great flocks, which daily increase by the accession of newly fledged broods, "swarm in myriads upon myriads round the villages on the Thames, darkening the face of the sky, as they frequent the aits of that river, where they roost." Soon after this, they assemble in great numbers on the roofs of churches and other large buildings, or the summits of lofty trees, for several days in succession, after which the great body of them are seen no more, though individuals may remain for several weeks afterwards. A little earlier than the autumnal congregating of the Martins, the Swallows forsake the chimneys and houses which they have hitherto frequented,

and roost altogether, in large flocks, on trees and bushes, as if to hold a general council of the nation, previous to undertaking an adventure so important as the periodic emigration ; or else to collect the scattered legions of the swift-winged army. " If ever I saw," says Gilbert White, " anything like actual migration, it was last Michaelmas day. I was travelling, and out early in the morning ; at first there was a vast fog, but by the time that I was got seven or eight miles from home, towards the coast, the sun broke out into a delicate warm day. We were then on a large heath or common, and I could discern, as the mist began to break away, great numbers of Swallows (*Hirundines rusticæ*), clustering on the stunted shrubs and bushes, as if they had roosted there all night. As soon as the air became clear and pleasant, they were all on the wing at once ; and by a placid and easy flight, proceeded on, southward, towards the sea ; after this I did not see any more flocks, only now and then a straggler."

Not only are the summer migrants now departing, but those also which spend the winter with us are beginning to arrive. Flocks of Fieldfares may sometimes be seen as early as the end of September, and Redwings still more numerously ; the Woodcock is flushed in low woods and reed-covered

marshes; Plovers and Sandpipers run in flocks on the sandy sea-beaches; and many marine birds, as Divers, Gulls, and Ducks, are beginning to spread themselves over the open bays and wide estuaries, after their brief summer in the polar regions.

We now proceed to describe our native species of the families *Tetraonidae* and *Ardeidae*; with the usual exception of a few, which, though occasionally found here, can be considered only as accidental stragglers.

TETRAO.

Gen. Char. Beak short, strong, arched to the tip, nostrils partly closed by a scale, and concealed by small and close feathers; a naked space above the eyes, coloured brightly; wings, short, rounded, hollow; tail large and expanding, consisting of sixteen feathers; feet feathered to the toes; toes naked, fringed, or pectinated at their edges.

TETRAO TETRIX. *The Black Grouse.* (Plate XIV.) Length twenty-two inches. Space over the eyes scarlet; general plumage black, glossed on the upper parts with steel-blue; a broad bar of white crosses the wing; the primaries have white shafts; under tail-coverts white; tail forked, each division curving outwardly in a singular man-

ner. The female, commonly called a Grey Hen, is considerably smaller; her plumage is reddish-brown, barred and speckled with black.

This fine game-fowl is found in most abundance in Scotland, in those districts where there are extensive sheep-walks, or meadows with rich and rank herbage, and where the woods consist of small tangled birch and alder, with tall fern. On the buds of the former the birds feed, and in the shelter of the long grass and ferns they are protected from observation. At the breeding season, the male is very pugnacious and intolerant of a rival; he struts about in the manner of the Turkey, with a peculiar drumming sound, to attract the hens, spreading his wings and tail, and puffing his plumage, which is then in its greatest brilliance. The nest is slightly made under some thick bush, and contains six or seven eggs, of a white hue, speckled with red. Seeds, buds, berries, grain, and insects, all in turn supply the Black Grouse with food.

LAGOPUS.

Gen. Char. Most of the characters agree with those of *Tetrao*. Tail short and nearly square; toes completely covered with narrow feathers; claws long, and nearly straight.

LAGOPUS SCOTICUS. *The Red Grouse.* Length sixteen inches. General hue rich chestnut-brown, becoming almost black on the breast, where the feathers are tipped with white; the whole plumage, except the quill-feathers, barred transversely with black. The tail is of eighteen feathers, all of which, except the middle pair, are, like the quills, of a dull brown. The female is smaller, and has the ground-colour of the plumage yellower in tint, and more extensive.

The wild moors of Scotland and the north of England are the home of this species, which has also the peculiarity of being confined to the British Islands. It is very abundant with us, as the immense numbers supplied to the London market in the season testify. Mr. Yarrell mentions a gentleman who shot fifty-two brace in one day, "never killing a bird sitting, or more than one bird at one shot." The Red Grouse breeds on the ground among heath; ten to fifteen eggs are laid, of a reddish-white tint, covered with spots of brown. It feeds chiefly on the shoots of heath, varied by berries and grain.

LAGOPUS MUTUS. *The Ptarmigan.* Length fifteen inches. In winter both sexes are wholly white, except the beak and cheeks, the shafts of the quills, and the seven

external tail-feathers on each side, which are blaek. In the breeding season the male has the head and neck, the breast, the back, and the middle tail-feathers speckled grey ; and the female has nearly the whole plumage of a yellowish hue, barred with blaekish.

The Ptarmigan inhabits the summits of the bleak mountain-ranges in the most northern parts of Scotland, where its colours, resembling in summer the grey liehened stones, and in winter the pure snow, afford it protection. Its voice is like the croaking of a frog ; it feeds on the berries and shoots of various mountain plants, and lays eight or ten eggs, on the bare ground, which are white, with some spots of brown.

PERDIX.

Gen. Char. Beak short, strong, arched, naked at the base ; nostrils partly covered with a naked scale ; wings, short, rounded, and hollow ; tail short ; legs and feet naked ; the toes united to each other as far as the first joint.

PERDIX CINEREA. *The Common Partridge.* Length twelve inehes ; general hue ehestnut-brown, mueh varied and freekled ; the faee yellowish ; erown and neck greyish ; back and wing-eoverts mottled with three shades of brown,

the feathers having pale shafts; wing-quills greyish, barred with brown; rump and tail-coverts freckled, with bars of chestnut; under parts greyish, with a crescent of chestnut on the belly; the sides broadly barred with chestnut.

The Partridge abounds in districts where corn is cultivated, and is found to increase with the extension of agriculture. As early as February it begins to seek its mate, and in April or May the female lays her numerous eggs, on the ground, concealed by high grass or clover, or growing corn. These, which are sometimes more than twenty in number, are of an olive hue. The Partridge is a careful and attentive mother.

COTURNIX.

Gen. Char. Beak strong, shorter than the head, arched; nostrils half covered with an arched scale; tail very short, rounded, and almost hidden by the coverts.

COTURNIX VULGARIS. *The Common Quail.* Length seven inches. Head dark brown, with a pale streak along the crown, and another over each eye; upper parts of the body brown, with pale shafts and streaks; quills dusky, with lighter bars; chin and throat white, with two crescents of

dark brown across the latter; breast pale chestnut, with yellow shafts; under parts dull white, the sides streaked with chestnut. In the female the creases are wanting on the throat, and the breast is marked by small spots of dark brown.

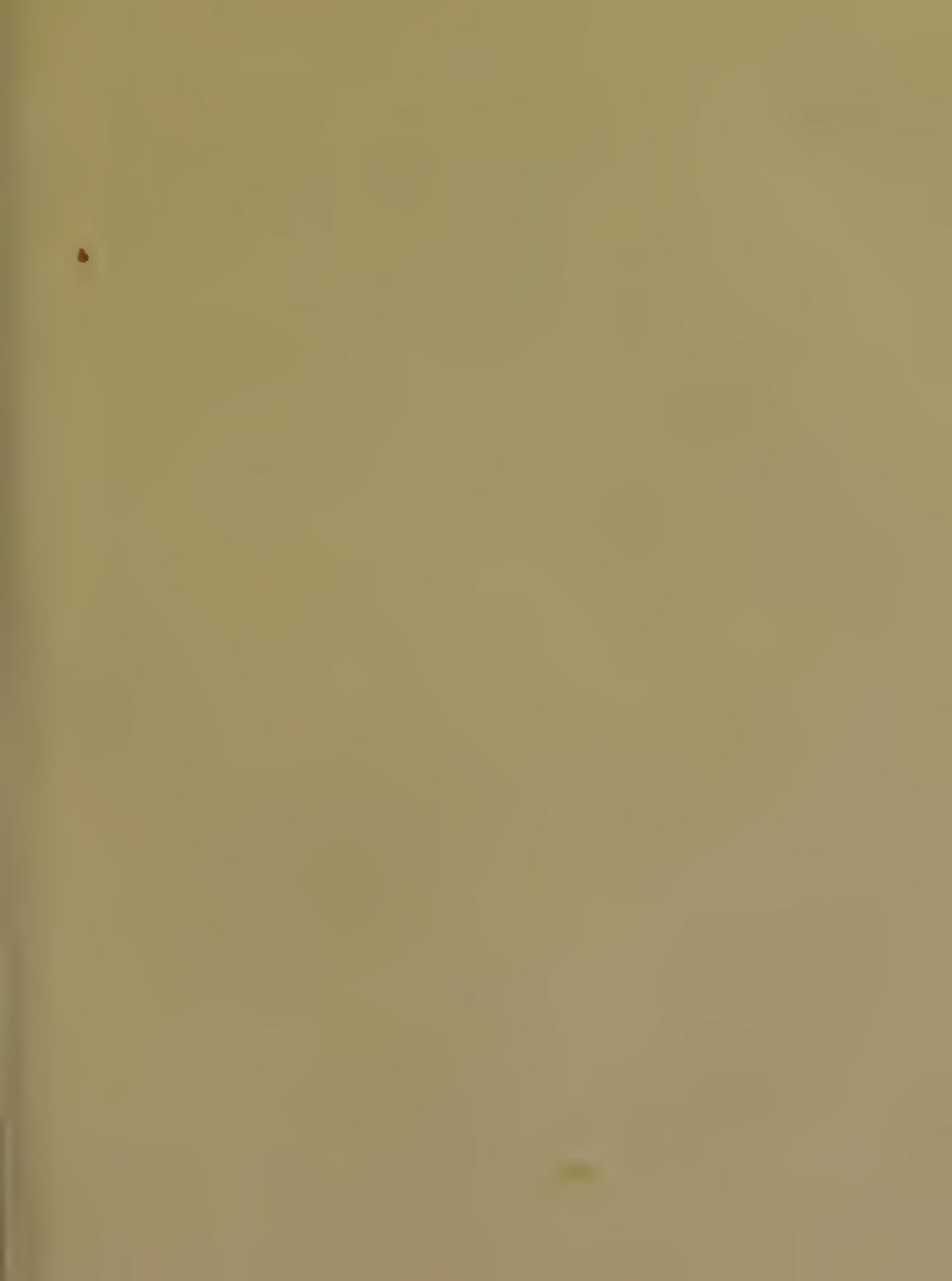
The migratory habits of this species are particularly interesting, as recalling to our remembrance the miraculous supply of the Children of Israel, in the wilderness, when God "rained flesh upon them as dust, and feathered fowl like as the sand of the sea." In April they arrive in their northern flights on the shores of Greece, in incredible numbers, and it is recorded that one hundred thousand have been taken in one day in the south of Italy. In England, it can hardly be considered as other than a summer visitor. The Quail does not pair like the Partridge, but each male has many females; the latter lay from eight to a dozen eggs, of a buff ground, blotched with brown; a few fragments of straw or dry grass constitute the only nest, but the situation is sheltered by being placed among standing corn or high grass.

GRUS.

Gen. Char. Beak long, straight, compressed, pointed ; nostrils large and perforate, placed in a furrow ; legs long and strong, naked above the heel-joint ; toes strong but short ; the hind toe placed high above the ground.

GRUS CINEREA. *The Common Crane.* Length four feet. Beak greenish-yellow ; eyes red ; legs and feet dark grey ; crown and nape of the neck, and throat and fore part of the neck, dark blue-grey ; sides of the neck white, reaching to the eyes ; wing-quills black ; all the rest of the plumage dark grey ; the tertials lengthened and forming loose waving plumes, which were formerly worn as ornamental parts of head-dress.

Whatever may have been its frequency formerly, the Crane cannot now be considered other than a rare bird in Great Britain. It seems to occur more frequently in autumn and winter than at other times. It feeds on frogs, snails, and worms, as well as on the seeds of aquatic plants, and various grains.





Heron

Dwarf



ARDEA.

Gen. Char. Beak long, straight, compressed, pointed; upper mandible furrowed; the edges notched or jagged; cheeks naked; legs naked above the heel; toes long, slender, all resting on the ground; claws long, sharp, compressed, the middle one pectinated on the inner edge; wings ample, rounded, very hollow; tail short; plumage of the head, neck, breast, and back becoming long, narrow, and pointed during the breeding season.

ARDEA CINEREA. *The Common Heron.* (Plate XV.) Length three feet. Beak yellow, as are the legs and feet; eyes bright yellow; naked face, greenish; head ashy-white, the long plumes that descend from the hind-head dark blue; neck white, marked with dark grey dashes; upper part of the body and wings pearly grey; wing-quills black; tail slate-grey; under parts ashy, with black streaks.

By the side of still rivers and lakes, on the banks of estuaries, or on the shoals of muddy harbours, the Heron may often be seen picturesquely standing, as he watches motionless for his aquatic prey. Fishes, snails, the larvæ of water-insects, frogs, toads, and newts, form its principal food, which are seized by the lightning-like stroke of his powerful beak, when they come within reach. In spring

the Heron begins to attend to its domestic economy, in which it much resembles the Rook ; for very many nests are built together on the same and contiguous trees, which are occupied year after year. As many as eighty nests have been counted on one tree. The eggs, four or five in number, are of a pale green hue. In the days of falconry, the Heron was a favourite game.

BOTAURUS.

Gen. Char. Beak longer than the head, strong, higher than broad ; the angle of the lower mandible placed far forward ; nostrils in a deep furrow, partly covered by a membrane ; legs rather short and strong ; toes long and slender, middle toe as long as the tarsus, all resting on the ground ; wings rather long ; back of the neck bare of feathers, but covered by those of the sides.

BOTAURUS STELLARIS. *The Bittern.* (Plate XV.) Length two feet and a half. Beak and cheeks yellowish-green ; eyes yellow ; legs and feet grass-green ; crown black, glossed with green ; all the upper parts reddish-buff, irregularly barred, spotted, and freckled with black and dark chestnut ; quills mottled with chestnut and dark grey ; chin yellowish-white ; a streak of deep brown runs down each side of the

throat; breast-feathers buff, with black discs; under parts buff, streaked with black.

The Bittern, though well known from its deep and hollow voice, uttered in the silence of evening, is by no means common; and its habits of skulking by day in the concealment of thick flags and rushes, in unapproachable morasses, and of coming abroad to feed during the night, renders it very rarely seen. A few instances are on record of its having been known to breed in this country; the nest is placed on the ground beside water, well concealed among the herbage; the eggs are of a pale brown hue.

Several other species of *Ardeadæ* are enumerated as occasionally found in Britain, but none of them are sufficiently common to warrant their place in this work.

CHAPTER X.

OCTOBER.

THERE is something in a walk along the shores of the ocean that is always pleasing; and its charm is less dependent on the season of the year than that of most other situations. The yellow sands are as smooth in winter as in summer, and the tall white cliff that rears itself above them reflects the beams of a December's sun, as brightly as if it were July; while the broad expanse of sea bears pretty nearly the same appearance at every season, whether sleeping in its beautiful calmness, or breaking in sparkling little ripples along the sand, or rolling up in long lines of crested surges, and dashing with hollow roar in foam and fury upon the beach.

We will then take an autumnal walk on the shore, and

see whether it affords us any peculiarities worthy of observation in Ornithology. We shall at least enjoy the pleasure of the scene, if we find but little new, and shall be able to echo the language of Charlotte Smith, in her beautiful stanzas on the Ocean :—

“ ‘Tis pleasant to wander along on the sand,
Beneath the high cliff that is hollow’d in eaves ;
When the fisher has put off his boat from the land,
And the prawn-eatcher wades thro’ the short rippling waves.

“ While fast run before us the Sandling and Plover,
Intent on the crabs and sand-worms to feed,”—

we may stop to admire the humble sea-pink, which is growing at the base of the rocks, and in whose slender grass-like leaves and rosy flowers we recognize an old acquaintance, the “thrift,” that is so much used as an edging in cottage-gardens. Or if we gaze upwards, we shall discover, jutting out from the crevices of the rock, bunches of samphire, which forms an agreeable pickle; this plant delighting to grow where the spray of the sea is sprinkled upon it by the dashing of the tide, or borne upon the wings of the storm.

Just above the limits of high-water, we shall be struck with the large gaudy flowers, or long and slender seed-pods

of the yellow horn-poppy; or come upon tracts covered with the sea-holly, whose leaves, bristling at all points with sharp spines, like those of the bush after which it is named, are distinguishable at once by their pale blue, or glaucous hue. But much more pleasing than any of these, is the sea-side convolvulus, which spreads its trailing stems and broad leaves over the slopes of the sand-hills, relieving their dazzling whiteness with a carpet of deep green verdure, very refreshing to the eye, above which it expands its large purple-striped flowers of elegant form to the morning sun; blossoms of brief duration indeed, for their trumpet-like expanse is closed and wrinkled up in a few hours, but renewed every day in constant succession for several months.

If we pursue our way where some bold promontory projects into the sea, presenting a barrier to the mightiest waves, we shall find amusement among the seaweeds that grow upon the masses of broken rock at its foot.

“The feather'd conserva of deepest carnation,
The dark-purple slake, and the olive sea-thong;”

these and others of manifold forms toss their long tangled tresses, like the mane of a sea-monster, over the black and slimy rocks, or in minuter kinds, inhabit with the little microscopic marine-insects, the quiet and secluded pools of

water, a few inches square, left by the retiring tide in the little hollows.

Among these we perhaps discern a bird conspicuous by his livery of black and pure white, disposed in strongly marked contrast, and by his long, straight, and powerful beak of rich orange, and by his crimson eye, as he peers about under the projections of the rocks. Now he applies the wedge-like tip of his beak to the stone, and wrenches up something which he eagerly devours; and now he peers curiously into the hollows for another prey. It is the Oyster-catcher (*Hæmatopus ostralegus*); he is engaged in detaching the limpets which adhere to the surface of the rocks. Presently we see several others emerging from behind projecting points; and away they all fly, with a loud and clamorous whistle, alighting on a broad *scalp*, or half-submerged flat surface of rock, where the ebbing tide is exposing many marine animals, on which these birds delight to feed. The periwinkles that crawl among the weeds, or the beds of mussels that are attached to the rock by their cables of *byssus*, are picked off and devoured; and those bivalves that are too large to be thus procured, are disposed of in another way, for which the beak of this bird is beautifully adapted. The tip of this organ is brought to a

sharp vertical edge resembling a chisel; this it can insert between the halves of a bivalve shell, if open in the smallest degree; and once inserted, the two mandibles, which are very powerful, giving a sudden lateral wrench, in a moment force open the shells, and extract the delicious morsel. The strong shells of oysters, left uncovered at low-water, are opened in this manner, from which the bird has derived its common name.

A flock of Curlews (*Numenius arquata*) is approaching the shore from over the low inland hills. They come in a double line, meeting in a single bird, in the form of a wedge, or of a V with the point foremost, flying in a direct line to their feeding-ground, which the tide is just relinquishing. Suddenly they perceive us, and deviate from their course, uttering a loud whistle of alarm; other flocks that were following them recognize and repeat the note, and turn away at the same spot. But they all wheel round, and alight on yonder sandy flat, where multitudes of small crabs and shrimps, aquatic worms, and shell-fish are ready to regale their appetite. The regularity of the return of these birds to their feeding-spots, as soon the receding tide exposed them, notwithstanding that they had been in the inland fields, far out of sight of the shore, is thus

noticed by Sir William Jardine. "They retired regularly inland after their favourite feeding-places were covered. A long and narrow ledge of rocks runs into the Frith, behind which we used to lie concealed, for the purpose of getting shots at various sea-fowl returning at ebb. None were so regular as the Curlew. The more aquatic were near the sea, and could perceive the gradual reflux; the Curlews were far inland, but as soon as we could perceive the top of a sharp rock standing above water, we were sure to perceive the first flocks leave the land; thus keeping pace regularly with the change of the tides."

A little further on, where the efflux of a little stream has raised a low bank of mud, exposed by the periodical ebbing of the sea, we see a large flock of Redshanks (*Totanus calidris*). They run hither and thither with incessant agility, and as if motion were absolutely indispensable; even if they stand still a moment, the head and the tail are bobbed up and down continually. The mode in which they obtain their prey on these soft mud-banks is curious: the worms and mollusea that inhabit the mud are their food; and the birds dart their beaks into the soil nearly up to the forehead, jumping up at the moment, so that the weight of the descending body may increase the depth of the stroke.

Where the beach is composed of hard sand, on which the advancing and receding ripples leave traces in shallow undulating lines; or of those small pebbles, called shingle, rounded and polished by the perpetual rolling action of the sea, and which, as they are washed up under every wave, produce a rustling sound somewhat like that of the wind among the sere leaves of autumn;—here at the very edge of the water delight to resort the Sanderling (*Calidris arenaria*) and some other of the more marine Plovers, and more especially the Dunlin (*Tringa variabilis*), the Knot (*T. canutus*), and others of the Stints and Sandpipers. These have all nearly the same manners; they run with excessive celerity along the beach at the very verge of the water, managing just to keep from being immersed with much adroitness, and yet snatching from the wave, as it rolls up or recedes, the sand-hoppers and other marine animals, which are revelling in its waters. They do not mind wetting their feet, and will frequently run into the water up to the knees. We should think it not unlikely that the name of the Knot, which is acknowledgedly only a form of Canute or Cnute, has allusion to the legend of that renowned monarch sitting on the sands until the tide surrounded his feet, rather than to

the suggested thought of Pennant, that "probably" this bird was a favourite dish with the Danish King.

The Dunlin in particular is the most numerous of our sea-shore waders. Sometimes it congregates in immense flocks, spotting the sandy shore for a great distance, or rising in great clouds to make their short wheeling flights from spot to spot, as fancy or the presence of prey may incite them. As they thus flit around, they alternately incline the body to one or the other side, so as to present to the observer either the dark upper surface, or the pure white of the lower, with a changeableness that has a singular and pretty effect.

Flocks of Ruffs (*Machetes pugnax*) are ever and anon passing over our heads. These flocks contain the young broods of the season, which have been reared in the great fens and inland marshes of Lincolnshire and Norfolk, and are now on their way, in their autumnal migration, to southern shores. The habits of this species are so unusual in the *Scolopacidae*, the family to which it belongs, and indeed in the whole order of *Grallatores*, that we shall give a long extract from Colonel Montagu's Ornithological Dictionary, illustrating its history. The species affords, as has been well observed, a beautiful instance of the analogy of forms belonging to distinct orders. "Among a family of the

typical *Grallatores*,” observes Sir William Jardine, “ we see one which is polygamous, and which, during the commencement of the love season, frequents a particular elevated spot, displaying his plumage to the other sex, and challenging and combating with all rivals that intrude on his station. These habits are all found among the *Rasores* almost alone, and it is among them, also, that we most generally see the largely developed wattles, and the exuberance of plumage, about the head or neck, represented here by the warty papillæ and large ruffs in the males, all which is still more marked by the constant variation which occurs in the colouring and marking of the latter.”

“ The trade of catching Ruffs,” remarks Colonel Montagu, “ is confined to a few persons, and scarcely repays their trouble and the expense of nets. These people live in obscure places on the verge of the fens, and are found out with difficulty; for few, if any, birds are ever bought but by those who make a trade of fattening them for the table. Mr. Towns, the noted feeder at Spalding, assures us his family had been a hundred years in the trade; that they had supplied George the Second, and many noble families in the kingdom. He undertook, at the desire of the late Marquis of Townsend, when that nobleman was Lord Lieutenant of

Ireland, to take some Ruffs to that country, and actually set off with twenty-seven dozen from Lincolnshire, left seven dozen at the Duke of Devonshire's at Chatsworth, continued his route across the kingdom to Holyhead, and delivered seventeen dozen alive in Dublin, having lost only three dozen in so long a journey, confined and greatly crowded as they were in baskets, which were carried upon two horses. During our stay at Spalding, we were shown into a room where there were about seven dozen males and a dozen females, and of the former there were not two alike. Our intrusion to choose some birds drove them from their stands, and compelling some to trespass upon the premises of others, produced many battles. It is a remarkable character of these birds that they feed most greedily the moment they are taken; a basin of bread and milk, or boiled wheat placed before them, is instantly contended for; and so pugnacious is their disposition, that they would starve in the midst of plenty, if several dishes of food were not placed amongst them at a distance from each other. Their actions in fighting are very similar to those of a game-cock; the head is lowered, and the beak held in a horizontal direction; the ruff, and indeed every feather, more or less distended, the former sweeping the ground as a shield to defend the

more tender parts ; the auricles [ear-coverts?] erected, and the tail partly spread ; upon the whole, assuming a most ferocious aspect. When either could obtain a firm hold with the bill, a leap succeeded, accompanied by a stroke of the wing ; but they rarely injured each other.

“ Few Ruffs, comparatively speaking, are taken in the spring, as the old birds frequently pine, and will not readily fatten. The principal time is in September, when the young birds are on the wing ; these are infinitely more delicate for the table, more readily submit to confinement, and are less inclined to fight.

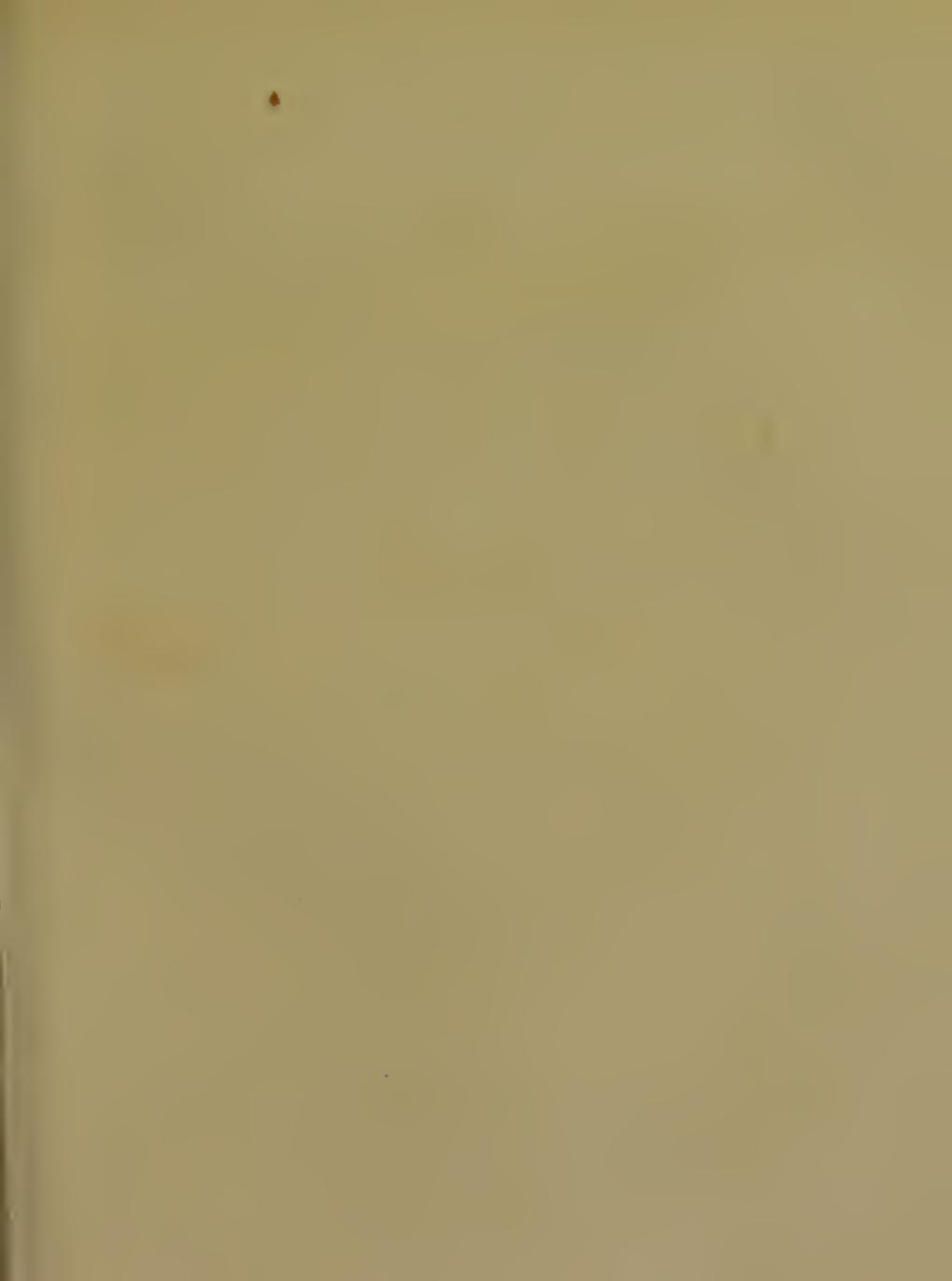
“ The manner of taking these birds is somewhat different in the two seasons. In the spring, the Ruff’s *hill*, as it is termed ; that is, they assemble upon a rising spot of ground, contiguous to where the Reeves [or females] propose to deposit their eggs ; there they take their stand at a small distance from each other, and contend for the females,—the nature of polygamous birds. This hill, or place of resort for love and battle, is sought for by the fowler, who from habit discovers it by the birds having trodden the turf somewhat bare, though not in a circle, as usually described. When a hill has been discovered, the fowler repairs to the spot before the break of day, spreads his net, places his

dceoy-bird, and takes his stand at the distance of about one hundred and forty yards or more, according to the shyness of the birds. The net is what is termed a single elap-nct, about seventeen feet long and six feet wide, with a pole at each end ; this, by means of uprights fixed in the ground, and each furnished with a pulley, is easily pulled over the birds within reach, and rarely fails taking all within its grasp ; but, in order to give the pull the greatest velocity, the net, if circumstances will permit, is so placed as to fold over with the wind ; however there are some fowlers who prefer pulling it against the wind, as for Plovers. As the Ruffs feed chiefly by night, they repair to the frequented hills at the dawn of day, nearly all at the same time ; and the fowler makes his first pull according to circumstances, takes out his birds, and prepares for the stragglers who traverse the fens, and have no adopted hill ; these are caught singly, being enticed by the stuffed birds. These stuffed skins are sometimes so managed as to be moveable by means of a long string, so that a jerk represents a jump, a motion very common among Ruffs, who, at the sight of a wanderer flying by, will leap or flirt a yard off the ground, by that means inducing those on wing to come and alight by him.

“ When the Reeves begin to lay, both those and the

Ruffs are least shy, and so easily caught, that a fowler assured us he could, with certainty, take every bird in the fen in the season. The females continue this boldness, and their temerity increases as they become broody ; on the contrary, we found the males at that time could not be approached within the distance of gun-shot. The females, the Reeves, begin laying their eggs the first or second week in May ; and we have found their nest with young as early as the 3rd of June. By this time the males cease to go to *hill*. The nest is usually formed upon a tump in the moist swampy places, surrounded by coarse grass, of which it is also formed. The eggs are four in number, of an olive colour, blotched and spotted with clove and liver-brown ; the young, while covered with down, are prettily spotted, soon leave their nests, and are difficult to find without a good dog. The autumnal catching is usually about Michaelmas, at which time few old males are taken, from which an opinion has been formed, that they migrate before the females and young. It is however more probable that the few which are left after the spring fowling, like other polygamous birds, keep in parties separate from the female and her brood, till the return of spring.”

With this long quotation we dismiss the interesting and





- 1 Woodcock
- 2 Snipe
- 3 Little Stint
- 4 Curlew

4



extensive family *Scolopacidæ*, with the exception of the specific descriptions of its native members, to which we now proceed.

NUMENIUS.

Gen. Char. Beak very long, slender, much curved, the point hard and rounded; upper mandible grooved, longer than the lower; nostrils linear; face feathered; legs and feet rather long, slender, bare considerably above the heel; hind toe set higher than the rest.

NUMENIUS ARQUATA. *The Common Curlew.* (Plate XVI.) Length of male twenty-one inches, females considerably larger. General plumage pale brown, each feather having the centre dark-brown; on the head and neck these centres are diminished to streaks; loins, rump, and tail-coverts white; tail barred with black and white; secondaries and tertials barred on the edges; primaries and greater coverts black; under parts white, very sparingly streaked with brown; legs and feet pale blue.

Through the winter months the Curlew is common around our shores, where it feeds on marine worms and crustacea; but in the breeding-season it retires inland, frequenting the

high downs and sheepwalks, and the extensive moors of the north. In these localities, a few dry leaves gathered together on the ground form its rude nest, in which it lays four olive-coloured eggs, blotched with brown and darker olive. Its note is a wild whistling scream, uttered as it wheels around the head of an intruder.

NUMENIUS PILEOPUS. *The Whimbrel.* Length sixteen inches. In its colours hardly to be distinguished from the preceding ; there is, however, a pale streak along the crown, and the white of the loins extends further up the back ; the flanks are barred transversely with dull brown. The beak is dark brown ; the legs and feet dark grey.

This is a much rarer species than the former, and is seen chiefly in spring and autumn, as it passes in its periodical migration. In the Orkney and Shetland isles it breeds, agreeing in its habits with the Curlew.

TOTANUS.

Gen. Char. Beak rather long, slender, nearly straight, rounded, soft at the base, hard and cutting at the tip, which is pointed ; the point of the upper mandible slightly bending downwards ; legs and feet long, slender, naked above the heel ;

the fore toes connected by a slight basal membrane; wings moderate, pointed; the scapulars lengthened.

TOTANUS CALIDRIS. *The Common Redshank.* Length eleven inches. In summer the upper parts are dusky brown with a greenish gloss, each feather darker along the centre, and many being barred with black and rusty; the loins and rump are white; under parts white, the feathers marked in the centre with dark-brown and red; these marks on the belly, flanks, and under tail-coverts become bars; the wing-quills dull black; the secondaries white barred with black. In winter the upper parts are uniform greyish-brown, with the exception of the rump; the under parts white, with a few dusky streaks. The beak at all times black at the point, red at the base; the legs and feet rich orange.

This is one of the most common of our wading-birds; in winter associating in flocks on the sea-shore, and retiring in spring to inland marshes, rivers, and lakes, where they pair and breed. Its shrill alarm-whistle is a great annoyance to sportsmen. Its eggs, which are spotted with reddish on a pale greenish ground, are laid under the shelter of some low bush.

TOTANUS OCHROPOUS. *The Green Sandpiper.* Length

nine inches and a half. Head and nape dark brown; a patch of white between the beak and the eyebrow; upper parts dusky-green, glossed, each feather spotted with white on its edge; the tail-coverts pure white; the tail white, barred with black; under parts white; the sides of the neck and breast marked with brown dashes; beak and feet dark olive.

The habits of this species are much the same as those of the preceding; but it does not appear to breed with us.

TOTANUS HYPOLEUCOS. *The Common Sandpiper.* Length seven inches and a half. Upper parts greenish-brown, each feather streaked and banded with a darker shade; wing-quills blackish, marked with a white patch on the inner webs; secondaries tipped with white; tail barred with shades of brown, more distinctly on the outer feathers, which are white and brown; under parts white, spotted on the throat with brown, and becoming ashy on the breast.

A lively and interesting species, very abundant on the margins of lakes on the northern parts of this island. It is constantly in motion, flirting the head and tail up and down, and running with celerity; on rising to wing, it utters a loud piping note. Its food consists of worms, slugs, and insects; and its four eggs, spotted with brown

on a reddish-white ground, are laid on a slight nest of leaves, concealed in some cavity of the bank of a stream or lake.

TOTANUS GLOTTIS. *The Greenshank.* Length twelve inches; head and neck greyish-white, marked with dark lines; upper parts of the body ashy-brown, with buff edges; wing-quills blackish; tail white, barred with brown; under parts white, the breast and sides slightly dashed with ashy; legs and feet olive-green. In the breeding season the upper parts become more olive, and the wing-coverts and tertials have dark spots on their edges; the lines on the neck also become nearly black.

It is chiefly in summer that the Greenshank is to be met with in this country, and then in no great numbers. Around the shores of Scotland, and in the adjacent isles, it is rather common. Its habits are almost exactly the same as those of the Redshank, with which it associates.

LIMOSA.

Gen. Char. Beak very long, stout at the base, compressed, slightly curving upwards; both mandibles grooved nearly through their length; the upper dilated at the tip, which is blunt, and projects over the lower; wings long and pointed; legs and feet

long; toes connected at the base by a membrane; hind toe jointed upon the tarsus.

LIMOSA MELANURA. *The Black-tailed Godwit.* Length seventeen inches. In winter the head, neck, and upper parts are ashy-brown; the wing-eoverts and tertials with pale edges, wing-quills black with white shafts, and white bases, forming a bar across the wing; tail black with the basal third white; under parts ashy-white, becoming purer on the hinder portion. In summer the head, neck, back, and breast are rusty-red or bright fawn-colour, each feather having a dark-brown centre; the white on the wing is more conspicuous; the belly is barred with dark brown.

The Godwits breed in inland marshes, but at other seasons frequent the sea-shores, where they feed on worms and other soft animals that inhabit the mud. They differ from the Snipes by not seeking concealment in danger, and by the alarm and vociferation which they manifest when their nests are approached. This species breeds in the fens of Lincolnshire and Norfolk; laying four pear-shaped eggs of a pale olive-colour, blotched with dark brown.

LIMOSA RUFA. *The Bar-tailed Godwit.* Length sixteen inches. The plumage, both in winter and summer, can hardly be distinguished by description from that of the

preeeding; the smaller size of this, however, and its tail, which is barred alternately with black and white throughout its length, are suffieiently distinctive marks at all seasons.

Its habits are no less similar, but the Bar-tail is the more common in winter, rarely remaining to breed with us. The females of the Godwits are larger than the males.

MACHETES.

Gen. Char. Beak moderately long, straight, slender, rather dilated at the tip; wings long and pointed; the face of the male is covered in the breeding season with fleshy warts; and the feathers of the neck are long and plumose, capable of being erected in a large ruff.

MACHETES PUGNAX. *The Ruff.* Length about twelve inches. In the breeding season, the head, the ruff, and the shoulders are "of a shining purple black, transversely barred with chestnut; scapulars, back, lesser wing-coverts, and some of the tertials pale chestnut, speckled and tipped with black; greater wing-coverts nearly uniform ashy-brown; quill-feathers brownish-black, with white shafts; rump and upper tail-coverts white; tail-feathers ash-brown, varied with chestnut and black; the feathers of the breast

below the ruff, and on the sides, chestnut, tipped with black; belly, vent, and under tail-coverts white, with an occasional spot of dark brown."

We have copied Mr. Yarrell's description of a male, but the proportions and distributions of the colours vary exceedingly, scarcely two birds being found alike. The male in winter, and the female, are destitute of the ruff, and the plumage assumes the common character of the Sandpipers, being more or less dusky brown, varied with rufous above, with darker centres, and white on the under parts.

SCOLOPAX.

Gen. Char. Beak long, straight, compressed at the base, dilated at the tip, where it is soft; the tip of the upper mandible enclosing the lower; legs comparatively short, slender, slightly or not at all bare above the heel.

SCOLOPAX RUSTICOLA. *The Woodcock.* (Plate XVI.) Length fourteen inches; plumage varied with pale wood-brown, chestnut, and dark umber, so disposed as to produce a minute and beautiful but indescribable pattern; four bands of blackish-brown cross the head and nape, and between the eye and the beak is another on each side; the wing-coverts are reddish, with open panther-like rings; the quills clie-

quered with black and pale bay; under parts pale brown, barred with darker.

Though a winter resident with us, there are many cases on record of the Woodcock having bred in this country; a dry situation is selected, in which, amongst dead leaves, with little concealment, three or four eggs are deposited, of a pale purplish tint, with irregular spots of dark brown. The excellence of this bird for the table, and the sport it affords in shooting, are well known.

SCOLOPAX MAJOR. *The Great Snipe.* Length twelve inches; the upper parts exhibit the same distribution of deep bistre-brown, pale brown, and bay, which is common to the Snipes; but the under parts from the chin to the belly are pale buff; the belly and vent white; the sides marked with semicircles of brown.

In the south-eastern parts of England this species occurs as a frequent autumnal visitor, but is rare in the north. It is sometimes called the Double Snipe, or the Solitary Snipe, though it is most generally observed in pairs. It is commonly found very fat, so as sometimes to be able to fly but with difficulty; hence it is delicious eating. Its food is said to consist almost exclusively of the larvae of the flies called Father Longlegs (*Tipula*), which inhabit the earth.

SCOLOPAX GALLINAGO. *The Common Snipe.* (Plate XVI.) Length ten inehes and a half. Upper parts blaek or very deep brown, beautifully varied with pale bay, whieh, among minuter markings, takes the form of a stripe along the erown, and two eonspieuous ones down each side of the baek, formed by the borders of the feathers; scapulars edged with white, and variously barred with bay, as are also the tertials; eoverts, seeondaries, and inmost primaries smoky blaek, tipped with white; rump and tail-eoverts barred with blaek on pale brown; tail rich blaek, with the tip bright chestnut, which is crossed by a blaek band; ehin, throat, and breast, pale brown, with dusky mottlings; sides banded, with black and white; belly white; under tail-coverts pale bay, barred with blaek.

The food of the Snipes eonsists of worms, larvæ, and other soft animals which dwell in boggy earth; and these are proeured by the insertion of the sensitive beak up to the forehead into the mud. In spring the male utters a peeuliar clieking sound, repeated many times in sueeession, varied by a bleating note; these are the conjugal salutations, which greet the female during her labours beneath, in ineubation. Her nest is but a slight depression in the earth, in which are placed four yellowish eggs, marked with

spots of several hues of brown. The young, before they leave the nest, attain a size and weight beyond that of their parents.

SCOLOPAX GALLINULA. *The Jack Snipe.* Length eight inches. General tints of the plumage almost exactly the same as those of the last described; but the central pale stripe on the crown is wanting; the tail is greyish-black; the belly and hinder parts are pure white slightly dashed with black.

The small size of this species has procured for it, in some places, the name of Half-Snipe; it is considered a sluggish bird, and flushed with difficulty. It is less common than the preceding, during the winter, and during the summer is scarcely ever seen. It breeds in Sweden and Norway.

TRINGA.

Gen. Char. Beak moderately long, sometimes slightly curved, pliable, compressed at the base, dilated at the point; wings long, pointed; legs and feet moderately long, naked above the heel; toes entirely divided; hind toe jointed on the tarsus.

TRINGA CANUTUS. *The Knot.* Length ten inches;

head, face, throat, and whole under parts orange-chestnut ; crown and hind-head spotted with black ; back, scapulars, tertials, and smaller wing-coverts black, edged with red and white ; great coverts ash-grey ; quills black, with broad white shafts ; rump and tail-coverts reddish-white, barred with black ; tail ash-brown, edged with white.

This is the nuptial plumage. In winter the upper parts are broccoli-brown, the under parts white ; on the whole head, neck, and breast, the feathers have dark brown centres ; the remainder of the plumage nearly agrees with its summer conditions.

The Knot appears on our sandy shores in large flocks in autumn and winter, remaining long enough to attain its nuptial dress, but not breeding in this country. It spends the summer in very high northern latitudes. Small bivalve shell-fish appear to constitute the chief food of this species, and its flesh is much esteemed.

TRINGA MINUTA. *The Little Stint.* (Plate XVI.) Length six inches. Head and whole upper parts rust-red, the feathers with dark brown centres ; wing-quills black, the primaries with white shafts, the secondaries with white tips ; tail ash-brown ; under parts white ; sides of the neck, and a band across the breast, rusty, speckled with

Plate XVII



- 1 Ring Dove
- 2 Turtle Dove
- 3 Nightjar

black. In winter all the parts which were rust-red become ash-grey, and the dark centres are diminished to central lines.

In the southern and eastern counties of England, the Little Stint is frequently met with on the sea-beach during the autumnal months, associating in flocks. Of its breeding habits we are quite ignorant.

TRINGA VARIABILIS. *The Dunlin or Purre.* Length eight inches. In summer the crown is rust-red, with black centres; neck greyish, with black streaks; upper parts of the body black, with rusty edges; wing-coverts ash-grey, with paler edges; quills black, with white shafts, secondaries with white edges; rump and tail-coverts mottled with black, ashy, and rust-red; tail pointed; the middle feathers dusky, the rest ash-grey; under parts white; throat streaked with blackish; breast mottled with black. In this state of plumage it is called the Dunlin; in winter, when it is known as the Purre, the upper parts are ashy-grey, with darker centres; the breast, and under parts, pure white.

This is the most common species of *Tringa* we have; and it remains on our shores the whole year, except the brief breeding season, when it retires to the inland moors

of the northern parts of Scotland and the Hebrides. A few fragments of dry heath and grass, gathered into a slight hollow, form the apology for a nest, on which the Dunlin lays four eggs, similar to those of the Snipe, but smaller. During the remainder of the year, it associates in immense flocks, running with incessant agility, or taking short fitful flights, along the edge of the waves, picking up minute crustacea, and other marine animals. When the tide is at flood, the flocks rest awhile, huddled together on some rock, waiting for the ebb.

TRINGA MARITIMA. *The Purple Sandpiper.* Length eight inches and a half. Upper parts bluish-black, some of the feathers having white edges, some reddish ones; head streaked with dark on light grey; wing-coverts dove-grey; quills dusky black, with white shafts; tail-coverts and tail black; the outer tail-feathers paler; under parts white, dashed with grey on the breast and sides. The shortness of the legs and the blue tint of the plumage at once distinguish this from all other of our *Tringæ*. It is not a common bird with us, but may be seen on our coasts in winter, searching among the seaweeds for crustacea and marine mollusea.

It is found on the coast of Norway all through the

winter; "as the ice accumulates, and the sea freezes up, it betakes itself to the outermost range of islands and rocks with which that coast is so numerously studded, feeding among the seaweed left bare by the tide, or on the marine insects which it finds at the edge of the water. During windy weather, when not feeding, it seeks shelter in the crevices of the rocks." It breeds in the Polar regions: producing four eggs, which are pear-shaped, yellowish-grey, sprinkled at the larger end with spots and specks of brown.

CHAPTER XI.

NOVEMBER.

THIS is probably the most cheerless of all the months with us; the beauty of summer and the fecundity of autumn have both passed away, and the brisk and vigorous hilarity of the hard winter has not yet set in. The foliage of the woods having relinquished its cheerful green, that hue which so refreshes the gazing eye, and assumed for a brief season a more varied and picturesque array of many tints,—red, yellow, and brown,—an array in which the painter delights to contemplate nature, and to transmit her manifold hues to the living canvas,—has yielded leaf by leaf to the howling blasts, and left the trees to stretch their gaunt arms in unpleasing nakedness to the murky sky of winter. November is a month of fogs; the days on which

the sun's cheerful beams shine out upon us, are few and far between ; and the depressing effect of this heavy and damp condition of the atmosphere is felt by the aged, the melancholy, and the sick, and especially those who are suffering from nervous disorders. But we are writing for the young and the cheerful, whose spirits are but little affected by atmospheric changes ; and perhaps there is no study, at least of earthly things, like Natural History, for the power of supplying a cheerfulness which is independent of circumstances.

The bleak north-east winds that commonly prevail in this season, blow over to us great numbers of Woodcocks (*Scolopax rusticola*) from their summer haunts in Norway and Sweden. They are said to collect on the coast in great numbers, previously to setting out on their voyage, and wait for a favourable wind, which materially aids their labour ; for their power of wing seems too feeble to enable them to struggle with adverse and boisterous gales. The dependence of the arrival of these birds on the state of the weather, is strikingly alluded to by Captain Brown, in his notes to White's History of Selborne. "So well skilled," he observes, "are these birds in atmospheric changes, that the instant a fair wind springs up, they seize the opportu-

nity; and where the sportsman has seen hundreds in one day, he will not find even a single bird the next. At the Land's End, Cornwall, every fisherman and peasant can tell, from the temperature of the air, the week, if not the day, on which the Woodeocks will arrive on the coast. They come in prodigious flocks, which reach the shore at the same time; and from their state of exhaustion, induced by their long flight, they are easily knocked down or caught by dogs. A short respite soon invigorates them, so that they are enabled to pursue their inland course, but till thus recruited, they are an easy prey, and produce no small profit to those who live in the neighbourhood."

This precision is confirmed by a story narrated by Mr. Warner. "We were told at Truro, as a proof of the definitive time of their arrival, that a gentleman then had sent to the Land's End for several brace, to be forwarded to him for a particular occasion. His correspondent acquainted him in answer that no Woodeocks had yet arrived; but that, on the third day from his writing, if the weather continued as it then was, there would be plenty. The state of the atmosphere remained unchanged, the visitors came as it was asserted they would, and the gentleman received the number of birds he had ordered."

It is observable that most migratory birds appear to select the night for the performance of their migrations. Perhaps there is something in the condition of the air, which makes continuous flight less laborious at that time than during the day; or perhaps the darkness may prevent their attention from being distracted by the scenes over which they are moving. It would appear also, that migration is performed at a considerable elevation, where the rarity of the atmosphere may present less resistance to the propulsion of the bird through it. A respectable person residing near the coast, and who, being a keen pursuer of wild-fowl, was in the habit of frequenting the sea-shores at an early hour in the morning, assured Mr. Selby that he had more than once noticed the arrival of a flock of Wood-cocks coming from the north-east just at the dawn of day. His attention was first attracted by a peculiar sound in the air over his head, which he found to proceed from birds descending in a direction almost perpendicular; and which, on approaching the shore, separated, and flew towards the interior; and these birds, on his shooting some of them, proved to be Woodcocks, as from their appearance and manner of flight he had supposed them to be.

In many of the delicate species which come to us in

the spring from the sunny south, to fill our groves with summer harmony and beauty, the males arrive several days before the females, but in the Woodeoek this order is reversed, as the first arrivals consist almost exclusively of females.

One is apt to wonder how the multitude of these birds can not only sustain themselves, but continue in high condition, at a season when to our senses there seems but little to be met with that could afford them sustenance; especially when we know that the food of this bird consists almost entirely of earth-worms. Yet these animals must be very numerous, and though they remain a little way below the surface of the earth, the keen perceptions of this bird are able to discover them unerringly, and its organs are suited to extract them from their retreat, though in the dark. Montagu supposes that a very acute sense is the means by which they discover their prey. "These birds," he remarks, "rambling through the dark, are directed by an exquisite sense of smelling to those places most likely to produce their natural sustenance, and by a still more exquisite sense of feeling, in their long bill, collecting their food. The eye is not called into use, for, like the mole, they actually feed below the surface; and

by the sensibility of the instrument whieh is thrust into the soft earth, not a worm ean escape that is within reaeh. A Woodeoek in our menagerie very soon discovered and drew forth every worm in the ground, whieh was dug up to enable it to bore; and worms put into a large garden-pot, eovered with earth, five or six inehes deep, are always elearcd by the next morning, without one being left. The enormous quantity of worms that these birds eat is scarcely eredible: indeed, it would be the eonstant labour of one person to procure sueh food for two or three Woodeoeks."

The manner in which the Woodcoek eats its prey when it has eaptured it, is very curious; and is interestingly described by Bowles, in his Natural History of Spain, who witnessed the feeding of some tame Woodcocks kept by the Infant Don Louis, in an aviary at San Ildefonso. "Here there was a fountain whieh flowed perpetually to keep the ground moist; and in the middle a pine-tree, and shrubs for the same purpose. Fresh sod was brought to them, the riehest in worms that eould be found; in vain did the worms seek eoneealment when the Woodcock was hungry; it diseovered them by the smell, stuek its bill into the ground, but never higher than the nostrils; drew them out singly, and rising its bill into the air, it extended upon it

the entire length of the worm, and in this way swallowed it smoothly, without any action of the jaws. The whole operation was performed in an instant; and the motion of the Woodeoek was so equal and impereceptible, that it seemed doing nothing. I did not once see it miss its aim; for this reason, and because it never plunged its bill up to the orifice of the nostrils, I concluded that smell is what directs it in search of its food."

Towards the end of this month the Stoek-dove (*Columba oenas*) arrives in large numbers in our southern counties, joined by floeks of the Ring-dove (*C. palumbus*), which, though resident all the year in this island, yet undergo a partial migration from north to south, and are increased by great numbers which are truly visitants from the northern countries of Europe. The Stoek-dove is one of the latest winter birds of passage. In situations where beeoh constitutes the principal portion of the timber in the woods, this bird is very numerous in winter; White speaks of myriads reaehing in strings for a mile together, as they went out in a morning to feed.

The common name of the Stoek-dove seems to have been given to this speies from a supposition formerly enter-tained, but now generally aeknowledged to be erroneous,

that it was the origin from which our breeds of Domestic Pigeons were derived. Yet White had long ago seen that this was improbable, though he was imperfectly acquainted with the habits of this bird. "Unless the Stock-dove in winter," he observes, "varies greatly in manners from itself in summer, no species seems more unlikely to be domesticated, and to make a house-dove. We very rarely see the latter settle on trees at all, nor does it ever haunt the woods, but the former, as long as it stays with us, from November, perhaps, to February, lives the same wild life with the Ring-dove, frequents coppices and groves, supports itself chiefly by mast, and delights to roost in the tallest beeches." It is now known, as White suspected, that the Domestic Pigeon is specifically identical with the small Rock-dove (*C. livia*), which differs in its breeding habits from our other wild Pigeons, inhabiting holes and caverns in the precipitous cliffs of the sea-coast. In this respect the tame Pigeon retains its native predilections, for the dove-cote is no bad representation of a little cavern, as its shelves answer very well to the ledges of the rocky sides.

The influence of domestication on those races of animals which will submit to it, is very great in changing the size,

form, colour, food, and habits. An examination of the favourite birds of a "pigeon fancier" would excite no small surprise and admiration in one unacquainted with the forms which these birds have been made to assume. In that breed called "Pouters," the neck is lengthened, and inflated in front to an enormous size and in a globular form; in the "Fan-tails," and especially the "Broad-tailed Shakers," the tail is greatly developed by the increase of its feathers, ordinarily twelve in number, to as many as thirty-six, which are carried expanded in a beautiful fan-like manner. The "Tumblers," so called from the fantastic somersets and other evolutions which they perform in the air, are marked by a small round head, and by a short conical beak, not more than half an inch in length; on the other hand the "Carrier" has the head greatly lengthened in front, and the beak produced to a length threefold that of the Tumbler. In the "Jacobins," the feathers of the neck are inverted, and stand up like a cowl over the back of the head, their curious structure extending down on each side as far as the elbow of the wing. In another breed, the technical name for which we are not aware of, the legs are feathered, and the plumes are in some specimens so lengthened as to stick out in the form of little wings.

Among all these faney varieties, the one whieh possesses most permancnt and general intercst is the Carricr. Even from the time of Greeian antiquity the Pigeon was employed to eonvey letters. Anacreon addresses an ode to it in this character; and we have the name of a victor in the Olympie games, who, by means of this winged postman, gladdened the heart of his father in Ægina with the intel- ligenee of his sueeess on the very day of his vietory. The most remarkable instance of the celerity of these acrial messengers which wc have met with, is that recorded by M. Antoine in his ‘Animaux Célèbres.’ A gentleman of Cologne having oceasion to visit Paris, laid a wager of fifty napoleons, that his arrival should bc known to his friends at home within thrce hours, and as the distanee is about three hundred miles, the wager was at once aecepted. Having taken with him two carricr pigeons whieh had young at home, he despatcched them at eleven o’clock on the morning of his arrival at Paris, each with a note tied beneath the wing. The first arrived at Cologne at five minutes past one, and the other nine minutes afterwards; so that they had accomplished a rate of travelling of nearly one hundred and fifty miles an hour, supposing them to have proeeded in a straight linc from point to point. But as thrc is reason

to think that at least the first part of such a journey consists of spiral circles increasing in diameter, the real speed was probably very much greater than this. Mr. Rennic observes: "We have frequently witnessed the experiment made with other Pigeons, of taking them to a distance from the dove-cot, expressly to observe their manner of finding their way back, and we feel satisfied that their proceedings are uniformly the same. On being let go from the bag, in which they have been carried in order to conceal from their notice the objects on the road, they dart off on an irregular excursion, as if it were more to ascertain the reality of their freedom than to make an effort to return. When they find themselves at full liberty, they direct their flight in circles round the spot whence they have been liberated, not only increasing the diameter of the circle at every round, but rising at the same time gradually higher. This is continued as long as the eye can discern the birds, and hence we conclude that it is also continued after we lose sight of them, a constantly increasing circle being made, till they ascertain some known object enabling them to shape a direct course.

"It is not a little interesting to contrast the proceedings just described with those of a Pigeon let off from a balloon elevated above the clouds. Instead of rising in circles like the

former, the balloon-pigeon drops perpendicularly down like a plummet, till it is able to recognize some indication of the earth below, when it begins to wheel round in a descending spiral, increasing in diameter for the evident purpose of surveying its locality, and discovering some object previously known by which to direct its flight."

The mode by which the Carrier is trained to perform its intended work with certainty, is the following. The young bird, as soon as it can fly perfectly, is taken in a box or bag, about half a mile away from home, and then loosed; after it has returned two or three times from this distance, the length of its journeys must be gradually increased, until it will return from the most remote part of the country. It is necessary that the bird should be kept in the dark, and should be deprived of food for several hours before it is thrown off. It is doubtless to acuteness of vision, and to memory, that the Pigeon is mainly indebted for the precision of its flight.

We shall describe in this month, in addition to the *Columbadæ*, or Pigeons, two other families represented in Britain by only a few species, the *Certhiadæ* and the *Strigidæ*, or the Creepers and the Owls.

COLUMBA.

Gen. Char. Beak moderately strong, straight at the base, bent downward at the tip; nostrils covered with a soft inflated skin; legs short, partly feathered in front; toes entirely divided, three in front and one behind, the latter moderately long; wings long, pointed, and powerful; second quill longest; tail nearly even.

COLUMBA PALUMBUS. *The Ring-dove.* (Plate XVII.) Length seventeen inches. Beak orange-red, brownish above the nostrils, and white at the base; eyes pale yellow; legs and feet crimson; head and upper parts bluish-grey, assuming on the back and wings a darker tint; the feathers of the side of the neck glossed with green and purple, and some of them tipped with white, so as to form an imperfect collar; edge of the wing white, very visible in flight; quills dull grey, with white edges and black shafts; tail bluish-grey, with a dark band at the tip; the chin pale grey; throat and breast purplish-red; under parts ashy-grey.

This bird is provincially called the Wood Pigeon, the Cushat, and the Queest; with the exception of the Crowned Pigeon of the Indian Archipelago, it is one of the largest species of the whole order.

It resides in our wooded districts through the whole year ; but yet there is a partial migration from the north to the south on the approach of winter, and back again in spring. The coo is loud and mournful ; but it is one of those sounds which is never heard without pleasure ; it is uttered very early, and is one of the first harbingers of spring. The Ring-dove breeds on trees of no great height, making a very rude and loose structure of twigs horizontally laid across each other, on which two beautifully white eggs are deposited. A singular protection is afforded to the young against the cold, to which, in so open a nest, they would otherwise be particularly exposed, especially as they are hatched very early in the season. "Instinct," says Mr. Waterton, "teaches the parent bird to sit upon its offspring for a longer period after they are hatched than perhaps any other of the feathered tribe. In the mean time, the droppings of the young, which the old birds of some species carefully convey away, are allowed to remain in the nest of the Ring-dove ; they soon form a kind of plaster, strong and scentless ; this adds consistency to the nest, producing at the same time a defence against the cold."

COLUMBA AENAS. *The Stock-dove.* Length thirteen

inches. Beak reddish; eyes scarlet; legs and feet lake-red; whole upper plumage bluish-grey, dark on the crown; wing-primaries dull lead-grey, secondaries pale at the base, tertials spotted on the outer web with dark grey; tail bluish-grey, with a dark band across the tip, bounded above by a narrow band of pale grey; sides of the neck glossed with green and purple; throat and breast reddish-purple; under parts pale grey.

The Stoek-dove is confined to the southern part of our island, being unknown in Scotland, though found in Sweden. In Norfolk and Suffolk it is said to breed in holes in the ground, usually selecting a rabbit's burrow for the purpose. It lays its two eggs about a yard from the entrance, generally upon the bare earth, but sometimes on a few dry roots loosely put together. In other situations it breeds in the hollow heads of pollard trees. Its note is a hollow rumbling sound, very different from the plaintive eoo of the Ring-dove. The food of both species is the same; various sorts of grains and pulse, the mast of forest-trees, and even the leaves of turnips and other vegetables.

COLUMBA LIVIA. *The Rock-dove.* Length eleven inches; eyes pale orange; legs and feet red; beak brownish-red; upper parts French grey, more inclining to blue on the head

and neck, and on the wing-quills; two broad black bands across the middle of each wing; loins and rump pure white; tail and its coverts pearl-grey, the former tipped with a dark band; throat and neck glossed with purple and green; under parts pale grey.

This little dove, which, as we have stated, is the origin of all our domesticated varieties, is chiefly abundant in Scotland; its habits are in many respects those of the species already described, except that it chooses the damp and gloomy fissures and eaves of the seaward rocks for its favourite places of abode. "A curious assemblage of birds," says Sir William Jardine, "may sometimes be observed in and about the entrance of these sea-worn caverns. An Eagle, or a pair of Peregrine Falcons, may claim the centre of the precipice; a little lower Gulls and Guillemots may nestle; Cormorants may occupy the mouth of the cave, and Jackdaws and Starlings may chatter in its outward rents and crevices; the murmur of the Rock-dove, from its shelves, fills the interior, when it can be distinguished from the noise of the surge at its entrance." In addition to various grains and seeds, this species feeds largely on snails. It lays two white eggs at a time, which usually produce a male and a female; and two broods are reared in a season.

COLUMBA TURTUR. *The Turtle-dove.* (Plate XVII.) Length eleven inches and a half. Beak and eyes reddish-brown; legs and feet yellowish; upper parts wood-brown, merging into bluish-grey on the crown, and on the wing-coverts deepening almost into black, with rust-red edges; tail-coverts and middle pair of tail-feathers clove-brown, rest of the tail dark brown, tipped with white; outer web of the outer feather white; on the sides of the neck four rows of black feathers, tipped with white; chin, throat, and breast pale brown; the last tinged with purple; under parts white.

This gentle bird, the emblem of tenderness and conjugal fidelity, is but a summer visitant to our shores. It arrives in April, and spreads over the southern counties, though not in great numbers; in Yorkshire it is rare, and in Scotland scarcely seen. The coo of this bird, the love-note of the breeding-season, is eminently soft and soothing; and has afforded the poets many a beautiful allusion. The nest resembles in its slightness that of the Ring-dove, and, like it, this species lays two unspotted white eggs. Grain, pulse, and seed afford it food.

CERTHIA.

Gen. Char. Beak slender, both mandibles curving downwards; nostrils elongated, partly covered by a membrane; wings long, fourth quill the longest; tail long, graduated; the feathers pointed, stiff; feet with three toes before and one behind; the claws long, curved, and sharp.

CERTHIA FAMILIARIS. *The Common Creeper.* Length about five inches; upper parts generally dark brown, the centre of each feather pale brown; a pale streak over each eye; wing-coverts brown, tipped with white; quills barred with pale brown or black; tertials tipped with white; rump and tail-coverts tawny yellow; tail dull brown, with tawny shafts; under parts white, slightly tinged on the flanks with brown.

With the exception of the Gold-crest, this is the most diminutive of British birds. It resides all the year with us, but as it inhabits the dense woods, is shy and reclusive in its manners, and has an artful mode of concealing itself from observation, it is not often seen. It is an active, restless little creature, flitting continually from tree to tree, almost always alighting on the trunk near its base, whence it runs up like a mouse, often in a spiral direction, picking insects as it

goes, from the erevices of the bark. If alarmed, it will shift round the tree, adroitly moving as the intruder moves, so as always to keep the trunk between him and itself. It constructs its nest in the hole of a decayed tree, of twigs, lined thickly with fine grass, wool, and feathers. Its eggs are about seven, of a pale greyish-white sparingly marked with red and yellow dots.

TROGLODYTES.

Gen. Char. Beak slender, slightly curved, pointed; wings short, rounded, hollow; the fourth or fifth quill longest; tail short; legs and feet long, slender; outward toe partially united to the middle one; hind claw long.

TROGLODYTES EUROPEUS. *The Wren.* Length less than four inches; the whole upper parts dull chestnut-brown, indistinctly barred with a darker shade; the wings and tail rather redder in tint; the wing-coverts spotted with white; the primaries barred with black; a pale streak over the eye; the chin and throat pale yellowish-grey, becoming browner on the lower parts, where it is barred with dark brown.

The smallness of his form, his nimble mouse-like agility,

his grotesque figure, and the cheerfulness with which he pipes a lively strain even in the midst of winter, have combined to make the Wren scarcely less a favourite than his cousin and frequent associate, the Robin. Very early in spring the Wren is building: under the eaves of an out-house, in the thatch of a cottage, beneath the shelter of a bank, in the ivy of a wall, or among the moss that accumulates in the fork of a tree, its nest is frequently fixed; and it has been observed that the materials of which it is composed are generally adapted to the situation; thus, if built against the side of a hayrick, hay is the material employed; if against the side of a tree covered with grey moss, grey moss forms the nest; if in a bank among green moss, there this is adopted. The readiness with which the materials are procured may, however, have much to do with this selection. The nest is a thick dome, with a narrow entrance, and is well lined with feathers; ten or even more eggs are laid, which are white, sometimes speckled with red. The parents are very attentive nurses to their numerous offspring, supplying them well with insects and worms.

UPUPA.

Gen. Char. Beak long, slender, curved, pointed, higher than broad; nostrils partly open, partly overlapped by the feathers of the face; wings large, fourth and fifth quills longest; tail square; legs and feet short; claws strong, and nearly straight.

UPUPA EPORS. *The Hoopoe.* (Plate IX.) Length about twelve inches; the head is surmounted by an ample crest of broad feathers, capable of erection; these are orange-brown, becoming white towards the end, and tipped with black. The neck, back, and breast are reddish-grey tinged with purple, shading on the belly into pure white; the rump white; the tail-coverts black; the wings black, exhibiting, when closed and meeting over the back, five bands of white across the whole; tail also black, with a broad curved band of white.

This is a bird of remarkable elegance, which, though formerly considered only a rare and accidental visitor in England, is now found to be not uncommon in some of the southern counties, being met with nearly every spring and autumn. It feeds on insects, which it searches for on the ground among the rotten wood of decaying trees, and similar situations. Its note resembles the word "hoop,"

breathed so softly as to resemble the cooing of a dove. When tamed, it is confiding and affectionate in its manners.

SITTA.

Gen. Char. Beak straight, awl-shaped, broad at base, pointed, strong; tongue short, pointed, horny; wings moderate; fourth quill longest; tail short, square, flexible; feet very strong; lateral toes unequal; claws very strong, stout, and hooked.

SITTA EUROPEA. *The Nuthatch.* Length six inches nearly. Whole upper parts delicate slate-grey; a black streak passes from the beak, through the eye, and descends along the neck; tail, except the middle feathers, black, tipped with grey; cheeks and throat white; under parts orange, merging into chestnut on the vent and flanks.

Like the Creeper, the bird before us is pre-eminently a climber, running along the perpendicular trunks of trees or on the under sides of the horizontal branches with perfect ease and rapidity. It feeds on insects, worms, seeds, and berries; and is particularly fond of nuts;—these it fixes firmly in some crevice, and then, with a few strokes of its sharp and powerful beak, hawks a hole in the shell, and extracts the kernel. The Nuthatch builds in holes of trees,

sometimes selecting the chamber chiselled out by the Wood-pecker; if the entrance is larger than is consistent with its ideas of comfort, it plasters up a portion with clay. At the bottom of the cavity, on a heap of dry leaves and moss, lie six or seven eggs, which are white, with a few pale red blotches.

OTUS.

Gen. Char. Beak short, curving from the base; cere large; lower mandible notched; nostrils oval, oblique; head furnished with two tufts of lengthened feathers; facial disc complete; ear-opening large, covered by an operculum; wings long; second quill longest; feet feathered to the claws.

OTUS VULGARIS. *The Long-eared Owl.* (Plate XVIII.) Length about fifteen inches; eyes orange-yellow; feathers of disc pale brown, with an edge of dark-brown; tufts pale brown, with black centres; upper plumage a minute mottling of black and dark brown on a pale brown ground; wing-quills and tail-feathers pale chestnut, barred and speckled with dark brown; under parts pale brown, variegated on the breast with white and streaks of tawny; beak and claws black.

This species is more diurnal than some of our Owls, being



Snowy Owl

Long-eared Owl

Barn Owl

frequently seen abroad before sunset; and when disturbed during the day, it manifests little hesitation or confusion. It is a sylvan species, delighting in deep woods, where it chooses for its habitation some ivy-mantled tree or thick evergreen. It commonly makes use of the deserted nest of some other bird for its own domestic economy; that of the Carrion Crow is frequently adopted, and sometimes the old drey of a squirrel. Three or four eggs, pure white, and roundish in form, are deposited.

OTUS BRACHYOTOS. *The Short-eared Owl.* Length about fifteen inches; eyes golden-yellow; beak and claws black; disc black in the centre, paler towards the edge, surrounded by a whitish border; tufts dark brown, with the inner webs tawny; upper parts deep brown, the feathers with tawny edges; wing-quills pale reddish-brown, barred with black and tipped with grey; tail-feathers buff, crossed by five bars of deep brown; chin white; under parts pale buff, with dashes and streaks of black.

About the middle of October this Owl comes to us from the north, and from its association thus with the Woodcock, is called in some places the Woodcock Owl. It frequents stubble-fields, turnip-patches, etc., sitting on the ground, often beneath the protection of a hedge. In the

extreme north of Scotland, and in the adjacent islands, many remain to breed; the eggs, four or five in number, being laid upon the bare earth, which is merely scraped to a hollow to receive them. Small mammalia and birds form the food of this species, as of most other Owls.

STRIX.

Gen. Char. Head destitute of tufts; beak rather long, straight at the base, curved at the tip; facial disc large and complete; eyes small; ear orifice large, furnished with an operculum; wings ample; legs long and slender, feathered to the toes, which are thinly clothed with hairs.

STRIX FLAMMEA. *The Barn Owl.* (Plate XVIII.) Length fourteen inches; beak nearly white; eyes black; facial disc white, marked with reddish-brown at the eyes, and tipped with brown; upper parts buff, speckled with black and white, and on the tail with grey; tail pale buff, crossed by bars of penneilled grey; under parts pure white.

White Owl and Sereeh Owl are terms commonly applied to this species, which is the most abundant with us of the whole family. The former is sufficiently obvious; the latter is dependent on the loud and harsh shrieks frequently

uttered by it during the night. The more common appellation of Barn Owl indicates the propensity of this bird to inhabit buildings where it is little likely to be disturbed. Its fondness for rats and mice make it a valuable inmate of barns and granaries, and every farmer who knows his own interest would cherish and protect this Owl. It preys also on small birds, on beetles, and even on fishes. The Barn Owl lays two eggs at a time, which resemble in size and colour those of a hen; several broods are raised during the season.

SYRNIUM.

Gen. Char. Head destitute of tufts; beak strong, hooked from the base; disc large and complete; ear-orifice moderate, with a large operculum; wings short, hollow, and rounded; tail long, rounded; toes partially feathered.

SYRNIUM STRIDULA. *The Tawny Owl.* Length fifteen inches; beak and claws whitish; eyes blue-black; disc greyish-white, with a dark brown edge; whole upper parts ashy-grey, mottled in different degrees with tawny and dark brown; two white lines run down the shoulders and wings; primaries whitish, barred with dark brown; tail pale tawny, barred with dusky brown; under parts yellowish-white, the

feathers with a central streak, and several cross-bars of dark brown; legs and feet white. The females have a greater prevalence of tawny hues than the males.

In most woody places, this a common Owl, but it is scarcely ever seen by day; if disturbed however, it manifests, by its awkwardness and slowness of flight, how painful the light is to it. At night it is an active and vigorous hunter, pursuing young hares and rabbits, as well as the smaller mammalia, birds, and reptiles, and occasionally uttering a loud and melancholy hoot. It is a constant resident with us, breeding in April, and laying its white eggs in a hole of some decayed tree.

SURNIA.

Gen. Char. Head not tufted; beak short, curved from the base; cere small; disc incomplete; ear-orifice small; wings moderately long, stiff; third quill longest; legs and feet strong, thickly covered to the claws with unwebbed feathers; claws long, sharp, and much hooked.

SURNIA NYCTEA. *The Snowy Owl.* (Plate XVIII.) Length more than two feet; general plumage pure white, each feather marked towards the tip with a spot of dark brown, which on the under parts takes a crescent form.

In old individuals these spots gradually become lost, and the bird is of a snowy whiteness. The beak and claws are black; the eyes golden-yellow.

This very fine bird is an occasional winter visitor to the northern parts of this country. It hunts by day, and in many respects approximates to the *Falconidæ*. Hares, rabbits, grouse, and carrion of all kinds afford it food; and it is a dexterous fisher, grasping its finny prey, as it sails over the surface, with an instantaneous stroke of its powerful foot. When captured, it displays boldness and ferocity.

CHAPTER XII.

DECEMBER.

AMONG the most interesting scenes which a young Ornithologist can visit in this month, is one of those extensive harbours which are to be found on our coast, into which one or more rivers are continually pouring their contents of fresh water, and depositing an ever-increasing accumulation of alluvial mud. Such a harbour is that of Poole, in Dorsetshire, which, when the tide is up, presents a beautiful and broad expanse of smooth water, but at low tide is seen to contain an immense area of mud-banks, intersected by numerous channels of varying breadth and depth. Such a scene is the favourite resort of the vast flocks of ducks, comprising many species, which the severe weather of this season drives down from the northern regions of Europe,

to seek their food in waters that remain unfrozen. It is in the night that these flocks of wild-fowl assemble in the bays, either to float upon the rising and sinking wave, or to feed upon the multitudes of small shell-fish and other marine animals that live upon the unexposed mud. Wild Ducks, Wigeons, Pintails, Pochards, Seaups, Shell-drakes, and other species are here; and on moonlight nights it is considered excellent sport to seek them in punts, exploring the narrow channels and recesses of the mud. Great caution and silence are requisite for this amusement; the rays of the moon that discover the birds on the dark mud, are equally potent to reveal the low punt stealing along the edge of the bank; the wild fowl are wary and vigilant, and it is necessary to lie close until within range, and to fire at the moment of rising, or the quick-sighted birds give little time to present the piece. A large number are taken by placing upright nets in sweeping lines across a narrow part of the bay, which are suspended between perpendicular stakes.

The difference between the conditions of such a locality in summer and in winter, is depicted in interesting terms by Sir William Jardine. During the former season, "upon the low sandy or muddy coasts, or extensive marshes, where

the tide reedes for miles, and the only interruption on the outline is the slight undulation of some mussel-sealps, the dark colour of some bed of *zostera* contrasting against the long bright crest of the surf, or in the middle distance some bare posts set up as a land-mark, or the timbers of some ill-fated vessel rising above the quieksand,—there reigns a solitude of another kind; it is now broken only by the distant roll of the surf, by the shrill pipe of the Ring-Dotterel, or the glanee of its flight as it rises noiselessly; a solitary Gull or Tern that has lagged from the flock may sail along, uttering, as it were, an unwilling inward sound as it passes the intruder; everything is ealm and still,—the sensation increased by the hot glimmer that spreads along the sands: there is no voice, there is no animal life. During winter, the scene may, at first sight, appear nearly similar; the warm and flickering haze is changed for a light that can be seen into; the noise of the surge comes deeper through the clear air of frost, and with it at intervals hoarse sounds and shrill whistles to which the ear is unaccustomed; aeres of dark masses are seen, which may be taken for low roeks or sealps, and the line of the sea in the bays contains something which rises and falls, and seems as if it were about to be east on shore with every coming swell. To the

old sportsman all these signs are familiar, and he knows their meaning; but to one who has for the first time trodden these flat coasts, some distant shot or other alarm first explains everything. The line of the coast is now one dark moving mass; the air seems alive with water-fowl, and is filled with sounds that rise and fall, and vary as the troops wheel around; and this continues until they have again settled to their rest; as dusk approaches, these sounds are gradually resumed, at first coming from the ground, as warnings that it is time to be alert; as the darkness and stillness of night set in, one large flock after another hastens to its feeding-ground; and the various calls and the noise of wings are heard with a clearness which is sufficient to enable the sportsman to mark the kinds, and trace his prey to their feeding-stations, to make him aware of their approach long before they come within his reach."

Next to the *Rasores*, the *Natatores* are the Order of Birds most valuable to man; and among them the *Anatidæ*, or the family which comprises the Swans, Geese, and Ducks, seem to hold a place parallel to that sustained by the *Phasianidæ*, or true Poultry-birds, among the former. Like them their flesh is savoury, tender, and delicate; they feed largely on grain and other vegetable nutriment; they breed

often, and are very prolific; their eggs are nutritious and agreeable; and above all, they manifest in a remarkable degree an aptitude for that kind of domestication, which is content to remain under the dominion and protection of man, without any actual restraint upon their liberty. All these circumstances combine to make this family an object of attention, and we may consider the members which compose it as among the most valuable of our smaller domestic animals.

There are many species, it is true, of this extensive family, which have never been reduced under the dominion of man; but there is no doubt that some, even of these, are susceptible of domestication; and some, who are now known only in a state of freedom, were perhaps formerly kept in a state of servitude. Thus the pictures preserved on the ancient Egyptian monuments, represent flocks of tame Geese, herded and tended by servants, which belong to species now known on the banks of the Nile, but only in a wild condition. Of late years the Canada Goose, readily distinguished by its eravat-like patch of white on its black neck, has been introduced and kept in a half tame condition on lakes and ponds in our pleasure-grounds; and,

though rather more rare, the Chinese Goose is occasionally seen, breeding readily with our common tame Goose. The Zoological Society and the Ornithological Society of London have both devoted a large amount of trouble and expense to the object of introducing and domesticating foreign species of water-fowl, with encouraging success; and the gardens of the former, and particularly the ornamental piecee of water in St. James's Park, where the collection of the latter Society enjoy their freedom, afford a very pleasing object of contemplation to any one interested in the success of such experiments. In these waters may be seen not only the Black Swan of Australia, the lovely Mandarin Teal of China, the scarcely less beautiful little Summer Duck of North America, and many other exotic species, but also specimens of most of the species of Swans, Geese, and Ducks that inhabit or visit the British Islands; and these, for the most part, sufficiently reconciled to breed in their semi-captivity. Some of these birds are eminently ornamental; every one is aware how much the interest and beauty of a sheet of water are heightened by the white forms, arching necks, and expanded wings of a pair of Swans, which slowly and gracefully sail hither and thither,

accompained by their own reflected images in the glassy mirror-like element :—

“The swan on sweet St. Mary’s lake,
Floats double, swan and shadow.”

And the introduction of other majestic species, possessing similar beauties, yet sufficiently diverse to be distinguished, will be readily appreeiated. The common Swan, indeed, seems not to have been originally indigenous to these islands, but to have been proper to Eastern Europe; whereas we have several native wild species.

But it is not only in a domesticated condition that the *Anatidæ* are useful to man. Immense numbers of wild fowl, belonging to this family, are shot or captured for the table, and that in almost every part of the globe. For the birds of this extensive family are truly cosmopolite; being found in abundance in all climes and in all regions, and seem to be equally esteemed everywhere. The most abundant, and one of the most highly prized for the delicacy of its flesh, is the Mallard, or Wild Duck (*Anas boschas*), which is spread over the whole of the northern hemisphere, being common in the United States, and in the Old World, from Britain to Japan. Various stratagems

and contrivances are resorted to for the capture of these birds. In some ponds which they frequent, wooden figures, carved and painted so as to resemble Ducks, are made to float on the surface, being armed with lead at the lower part to keep them upright, and moored to the bottom in such a position as to be within gun-range from a point on the shore, where the bushes afford concealment to the fowler. On the passing by of flocks of the wild-fowl, they commonly alight near the painted figures, betrayed by their sociality to their destruction; for, crowding together, many are killed by the shot of a single discharge. Occasionally the gunner lies in a low skiff, which is artfully dressed with coarse grass and herbage and branches of shrubs down to the water, so as to conceal his person and motions. From the front of his boat projects a sort of frame beneath the surface, over which the painted figures are so fixed as to float in various postures. Under cover of this artifice, which sufficiently resembles a little party of Ducks swimming near a small islet, the gunner slowly floats down with the stream, guiding his course with an oar, until he arrives at the very edge of one of those immense flocks of various species of water-fowl, which in the winter season may often be seen, almost covering the water of a large area, and,

wholly unsuspected, pours in his fire, so as to bring down great numbers; while the flushed floeks, ignorant of the origin of the noise, soon settle again, and are again shot down. In some of the great Ameriean rivers, the gunners take advantage of the masses of ice, which are commonly to be seen floating in the latter part of the winter, to deceive the birds. They paint their low boat or canoe wholly white, and lying flat along the bottom, with one hand over the side, silently urge themselves with a small paddle, direeting their course to a flock of Ducks, which, mistaking the skiff for a familiar mass of ice, allow great execution to be done among them, before they become aware of their danger. It is not uncommon thus to surprise a whole flock asleep, with their heads beneath their wings. In swamps, or soft morasses covered by the influx of the tide, but left bare at low water, a favourite situation for the resort of wild-fowl, as the retiring tide leaves their food in great abundance, an analogous stratagem is adopted. The total want of any shelter or concealment prevents the approach of the fowler under ordinary circumstances; to obviate this want, a large tight cask is sunk into the mud, suffiently to be firm, yet so as not to be overflowed by the tide, near the spot where the floeks have been observed to

feed ; the edges are concealed by grass and bushes, under the cover of which the fowler, unseen and unsuspected, watches the birds as they approach, and when a sufficient number are within range, sweeps them down with great success. In warm climates a simple device has been said to be practised with success, in water of sufficient depth to enable a man to wade up to the neck. The fowler covers his head with a large gourd or calabash, pierced with holes answering to his eyes and mouth, and immerses himself so as to expose only the calabash. The frequency of such a floating object deprives the Ducks of all suspicion of its nature, and thus the man is suffered to walk amongst them, and secure them by seizing each bird by the legs, and suddenly pulling it under water, when, twisting its neck, he fastens it to his girdle. The survivors are not at all alarmed by the disappearance of their companions, and thus successively fall a prey to their insidious admirer, until his cupidity is satisfied, or his means of disposal of the booty are exhausted.

But none of these methods, however successful, are worthy to be compared, for effect, with the systematic devices employed for the capture of Wild Ducks in England and France. The counties of Lincolnshire and Norfolk are

the localities in this country, which afford the great supply of these birds. A large portion of the area of these counties is occupied by the fens,—immense tracts of what in ancient times was forest-land, but which has undergone a great change of level, so as to be overflowed by the rivers which run through it, and thus reduced to immense marshes, interspersed with shallow but broad lakes. Millions of wild-fowl, especially Ducks, congregate in these fens during the winter season, some arriving in considerable numbers as early as October, but the vast body delaying their migration from the northern regions, until driven by the severity of established winter. To capture these, particularly for the supply of the London market, affords employment for many persons; and some idea may be formed of the importance of the business, when we state that the *decoys*, or contrivances and apparatus which we are about to describe, are let to the fowlers at a rent of from five to thirty pounds per annum, and that upwards of thirty-one thousand Ducks have been sent to the London market alone, from ten of these decoys in the neighbourhood of Wainfleet, in Lincolnshire.

The mode of forming a decoy differs in some of its details in different localities; but the following account, furnished

by Mr. Bonfellow, for Bewick's 'History of British Birds,' will give a sufficiently circumstantial idea of one. "In the lakes where they resort," says the writer, "the most favourite haunts of the fowl are observed; then, in the most sequestered part of this haunt, they cut a ditch about four yards across at the entrance, and about fifty or sixty yards in length, decreasing gradually in width from the entrance to the farther end, which is not more than two feet wide. It is of a circular form, but not bending much for the first ten yards. The banks of the lake, for about ten yards on each side of this ditch, or *pipe*, as it is called, are kept clear from reeds, coarse herbage, etc., in order that the fowl may get on them to sit and dress themselves. Across this ditch, poles on each side, close to the edge of the ditch, are driven into the ground, and the tops bent to each other and tied fast. These poles at the entrance form an arch, from the top of which to the water is about ten feet. This arch is made to decrease in height, as the ditch decreases in width, till the farther end is not more than eighteen inches in height. The poles are placed about six feet from each other, and connected together by poles laid lengthwise across the arch and tied together. Over them a net, with meshes sufficiently small to prevent the fowl

getting through, is thrown across, and made fast to a reed-fence at the entrance, and nine or ten yards up the ditch, and afterwards strongly pegged to the ground. At the farther end of the pipe, a tunnel-net, as it is called, is fixed, about four yards in length, of a round form, and kept open by a number of hoops about eighteen inches in diameter, placed at a small distance from each other to keep it distended. Supposing the circular bend of the pipe to be to the right when you stand with your back to the lake, on the left-hand side a number of reed-fences are constructed called shootings, for the purpose of screening from sight the decoy-man, and in such a manner that the fowl in the decoy may not be alarmed while he is driving those in the pipe; these shootings are about four yards in length, and about six feet high, and are ten in number.

"From the end of the last shooting a person cannot see the lake owing to the bend of the pipe; there is then no farther occasion for shelter. Were it not for those shootings, the fowl that remain about the mouth of the pipe would be alarmed, if the person driving the fowl already under the net should be exposed, and would become so shy as to forsake the place entirely. The first thing the decoy-man does, when he approaches the pipe, is to take a piece of

lighted turf or peat, and hold it near his mouth to prevent the fowl smelling him. He is attended by a dog taught for the purpose of assisting him: he walks very silently about half-way up the shootings, where a small piece of wood is thrust through the reed-fence, which makes an aperture just sufficient to see if any fowl are in; if not, he walks forward to see if any are about the mouth of the pipe. If there are, he stops and makes a motion to his dog, and gives him a piece of cheese or something to eat; upon receiving it, he goes directly to a hole through the reed-fence, and the fowl immediately fly off the bauk into the water; the dog returns along the bank, between the reed-fences and the pipe, and comes out to his master at the hole. The man now gives him another reward, and he repeats his round again, till the fowl are attracted by the motions of the dog, and follow him into the mouth of the pipe. This operation is called working them. The man now retreats farther back, working the dog at different holes, till the fowl are sufficiently under the net: he now commands his dog to lie down still behind the fence, and goes forward to the end of the pipe next the lake, where he takes off his hat and gives it a wave between the shootings; all the fowl under the net can see him, but none that

are in the lake can. The fowl that are in sight fly forward ; and the man runs forward to the next shooting and waves his hat ; and so on, driving them along till they come to the tunnel net, where they creep in ; when they are all in he gives the net a twist, so as to prevent their getting back : he then takes the net off from the end of the pipe, with what fowl he may have caught, and then takes them out, one at a time, and dislocates their necks, and hangs the net on again, and all is ready for working again.

" In this manner five or six dozen have been taken at one drift. When the wind blows directly in or out of the pipe, the fowl seldom work well, especially when it blows in. If many pipes are made in a lake, they should be so constructed as to suit different winds *."

In addition to the above particulars, we should mention the aid which the fowler derives from Ducks which have been tamed and trained to entice their wild brethren into the pipe, as from their important assistance the term *decoy* is given to this device. The Ducks, pinioned so as to prevent their flight, are taught to come at a whistle to any given point, and are there fed. Their presence on the surface of the lake attracts the wild flocks, which descend

* Hist. Brit. Birds, ii. 294.

to bear them company. When a sufficient number are assembled, the fowler shows a quantity of grain or hemp-seed within or around the mouth of the pipe, and gives the signal whistle. The trained Ducks instantly hasten to the sound, and are followed by the wild ones, and all begin eagerly to pick up the floating grain; the decoy-fowl lead the others into the pipe; and though the latter soon become suspicious from the increasing narrowness of the place, and essay to return, the appearance of the man at the reed-fence alarms them, and they have no alternative but to make forward to their now inevitable destruction.

The best situation for a decoy is a lake of at least two acres in extent, of irregular outline, surrounded by a belt of woods, and lying in a lonely marshy country. Such a place is sure to be the resort of large flocks of wild-fowl. To prevent the decoy-ducks from rambling, a low fence around the pond is an advantage.

With the specific descriptions of those members of the family *Anatidæ*,—the wild-fowl alluded to in the above notes,—which are found with us, we shall conclude our Popular British Ornithology.

ANSER.

Gen. Char. Beak not longer than the head, conical, elevated at the base; nostrils large, placed near the centre of the beak, pierced through; legs placed under the middle of the body, long; hind toe free, jointed upon the tarsus.

ANSER FERUS. *The Grey-lag Goose.* Length nearly three feet; beak and feet flesh-colour; the horny nail at the tip of the former white; head and upper parts ashy-brown, the plumage of the back with pale edges; inner part of the wings lead-grey with paler edges; outer portion with the first three primaries light bluish-grey; loins and rump pale grey; upper tail-coverts white; tail lead-grey tipped with white; chin and throat pale-grey; under parts white; sides and thighs barred with ash-colour.

That our domestic Geese were derived from this species, seems to be undoubted. In former times it was common in this country, remaining the whole year, and breeding in the fens of the eastern counties; but of late it has become quite a rare bird. Its food consists of grain of various kinds, the seeds of grasses and of sedges, and other aquatic plants. Its eggs, which are five or six in number, are of a yellowish-white hue, resembling ivory.

ANSER SEGETUM. *The Bean Goose.* Length thirty-four inches; beak orange, with the base, the edges, and the nail black; head, neck, and upper parts greyish-brown; the plumage tipped with paler tints; wing-coverts, secondaries, and tertials tipped with white; rump dark brown; upper tail-coverts white; tail-feathers greyish-brown, broadly edged with whitish; under parts white, tinged with brown on the breast.

This seems to be one of the most common of our Wild Geese, arriving in great numbers from the north on the approach of autumn, and sometimes appearing as early as August. The flocks fly in regular phalanx, assuming a wedge-like or triangular form, with the apex foremost. On their arrival they betake themselves to the grain-fields, or to the stubbles if the corn is cut, where they feed luxuriously. In the islands of the Scottish coast, and the northern counties of the main, this species breeds in the tall heath. The eggs are like those of the tame Goose, but not quite so large.

ANSER LEUCOPSIS. *The Bernacle Goose.* Length twenty-five inches. Beak, legs, and feet black; head white, except the crown and nape, and a patch between the eye and the beak, which are black; neck and back also black; scapulars,

wing-coverts, tertials, and the point of the wing French-grey, with black tips, narrowly bordered with white; rump bluish-black; tail-coverts white, tinged with grey on the breast, where it is abruptly separated from the black of the neck.

In some parts of this country, particularly on the western shores of Scotland, considerable flocks of this small but prettily marked Goose may often be seen during winter. It does not much visit the interior, but feeds, chiefly during the night, on the grasses of the low shores partially covered by the tide. It is supposed to breed within the Arctic Circle.

ANSER BRENTA. *The Brent Goose.* Length twenty-one inches. Beak, eyes, legs and feet, black; head, neck, and upper breast black, with a white patch on each side of the neck; upper parts of the body smoky-black, with lighter edges; wings, rump, and tail deep black; tail-coverts white; belly slate-grey; vent and under tail-coverts white.

This is our commonest, as well as smallest Wild Goose, being, in fact, less than a Duck. Like the preceding, it is only a winter migrant, but as that affects the western coast, this species chiefly prefers the eastern shores, where it feeds on marine grasses and seaweeds. Colonel Hawker thus

describes the mode of obtaining this Goose on the coast of Dorset and Hants. “Towards November or December, we have the Brent Geese, which are always wild, unless in very hard weather. In calm weather these Geese have the cunning, in general, to leave the mud as soon as the tide flows high enough to bear an enemy; and then they go off to sea, and feed on the drifting weeds. To kill Brent Geese by day, get out of sight in a small punt, at low water, and keep as near as possible to the edge of the sea. You will then hear them coming like a pack of hounds in full cry, and they will repeatedly pass within fair shot, provided you are well concealed, and the weather is windy to make them fly low. Before you fire at them, spring suddenly up, and these awkward birds will be in such a fright as to hover together, and present a mark like a barn-door. The Brent Geese, when fat, are excellent eating birds.”

CYGNUS.

Gen. Char. Beak equal in width throughout, elevated at the base, depressed at the point; transverse teeth (*laminæ*) nearly concealed; nostrils near the middle; neck slender, lengthened; wings large; legs short, placed far back; hind toe small, free.

CYGNUS FERUS. *The Hooper.* Length five feet; fore-part of the beak black; basal part angular, yellow; naked lores yellow; legs and feet black; whole plumage pure white.

The Hooper or Whistling Swan is distinguished from the tame Swan, by wanting the large knob at the base of the beak, and by its loud, not unmelodious, trumpet-like note, which it utters as it flies; as the flocks pass along in wedge-shaped phalanx, like the Geese. Large flocks visit this country in October, disperse around the coasts, and upon the large fresh waters, and retire again in April. In the north of Scotland, however, a few pairs spend the summer, breeding among rushes and aquatic herbage. The eggs are of a drab hue, or stone-white.

CYGNUS OLOR. *The Mute Swan.* (Plate XIX.) Length about five feet. Beak orange; the nail, the edges of the mandibles, the nostrils, the base, the naked lores, and a large knob on the forehead, black; the feet also black; the whole plumage white.

This beautiful bird is chiefly known with us as a half domesticated tenant of our rivers and ornamental waters, to which it is itself a great ornament; it is, however, still

1



2



3



4



Sm.

Mg.

Coturnix wan + Wild Mandarin

occasionally seen in a wild state, and on the Continent it is common. The beauty and grace with which

“The Swan with arched neck
Beneath her white wings mantling, proudly rows
Her state with oary feet,”

has been often described by poets, and admired by many others. It is quarrelsome and jealous during the pairing season, and an angry male is a formidable antagonist. The female lays half-a-dozen eggs of a dull greenish-white hue, in a nest made near the bank, of coarse reeds, grass, and other herbage.

Two other species of Swan are occasionally found in our waters, but they are rare.

TADORNA.

Gen. Char. Beak higher than broad at the base, depressed in the middle; breadth nearly equal throughout; upper mandible receiving the lower; nail hooked downwards; wings long, tertials broad, second quill longest; sexes nearly alike in plumage.

TADORNA VULPANSER. *The Common Shieldrake.* Length rather more than two feet; beak scarlet; legs and feet

pink; whole head, and upper neck green, bounded by a broad collar of white, followed by another of rich chestnut; scapulars and part of the tertials black; beauty-spot of the secondaries resplendent green; primaries dark brown; rest of the plumage white; the tail slightly tipped with black; and a line of deep brown running down the belly.

This very beautiful Duck remains with us through the year, haunting the maritime shores at most seasons, but in spring retiring a little inland, to low sandy commons, where it breeds in holes in the earth. Rabbit-burrows are frequently taken possession of by it. Ten eggs or more, of a glossy white, are laid at the distance of several yards from the mouth of the burrow, which, at the nuptial chamber, is lined with soft down from its own breast. The flesh of this species is in no esteem for the table, but the birds give good amusement to the night sportsman.

ANAS.

Gen. Char. "Beak about as long as the head, broad, depressed, the sides parallel, sometimes dilated; both mandibles furnished with transverse laminae; nostrils small, oval, lateral, placed before the base of the beak; legs rather short, placed under the centre of the body; tarsus somewhat rounded; toes three in front, connected by intervening membrane; hind toe

free, without pendent lobe or membrane; wings rather long, pointed; tail pointed, or wedge-shaped. The sexes differ in plumage."—*Farrell.*

ANAS CLYPEATA. *The Shoveler.* Length about twenty inches; beak lead-grey; feet orange; eyes yellow; whole head and upper part of the neck green; lower neck, scapulars, and upper part of the back, with some of the tertials, white; middle part of the back dusky, becoming almost black on the rump and tail-coverts; smaller wing-coverts, the outer webs of some of the tertials, and the tip of the quills, pale blue; a band of white across the greater coverts; beauty-spot green; quills brown; breast and belly rich chestnut; vent white; under tail-coverts black. In summer, the head becomes dark brown, the back and scapulars dusky, and the breast rusty with black spots. Females have the head and neck brown, the upper parts brown with pale edges, and the under parts pale brown.

The name of this species is derived from its broad, spoon-like beak. It is not uncommon in winter; but is for the most part migratory, a few only breeding here in marshes. The food is taken under water, and consists of various aquatic mollusca, insects, etc., together with seeds of grasses and grain.

ANAS ACUTA. *The Pintail.* Length twenty-eight inches, head and throat umber-brown, glossed with purple on the ear-coverts; a stripe of dark brown runs down the nape, merging into the delicately pencilled grey of the upper parts of the body and wings; primaries greyish-brown; secondaries black, with a beauty-spot of green; tertials lengthened and pointed, black, with broad borders of white; central pair of tail-feathers very long, slender, black; the rest brown, with white margins; under parts white, running up the sides of the neck in a narrow line; flanks pencilled with brown; vent and under tail-coverts velvet-black. The female is brown, mottled and varied with dark and light shades.

This elegant duck is also a winter visitant with us, more common in the southern than in the northern parts of the kingdom. It is esteemed for the table, and is therefore in request among wild-fowl shooters. "The notes of the Pintail," observes Colonel Montagu, "are extremely soft and inward; the courting note is always attended with a jerk of the head; the other greatly resembles that of a very young kitten. In the spring the male Pintail indicates his feelings by suddenly raising his body upright in the water, and bringing his bill close to his breast, uttering at the

same time a soft note. This gesticulation is frequently followed by a singular jerk of the hinder part of the body, which in turn is thrown up above the water."

ANAS BOSCHAS. *The Mallard.* (Plate XIX.) Length twenty-four inches; head and upper neck rich green, bounded by a narrow collar of white; lower neck and back greyish-brown, gradually deepening into black on the rump and tail-coverts; the four central feathers of the tail black, curled upwards at the tips, the others grey, margined with white; smaller wing-coverts greyish-brown; greater coverts barred with white and tipped with black; primaries dusky; beauty-spot on secondaries rich purple, bounded by a band of velvet-black, edged with white; tertials pale chestnut, dashed with white; under parts greyish-ash, delicately pencilled; under tail-coverts black; beak yellowish; legs and feet orange. The female has the upper parts varied with two shades of brown; the under parts pale brown, becoming chestnut on the breast.

This is the origin of our common breeds of domestic Ducks; it is generally distributed over these islands, breeding numerously in fens and marshes, and in the ditches of drier districts, and even among the bushes of upland pastures. Contrary to the habits of our tame Ducks, the

Wild Mallard contents himself with a single mate, with whom he remains through the year. Immense numbers of these wild-fowl are taken in decoys for the markets, in the fenny counties, as already described.

ANAS CRECCA. *The Teal.* Length fourteen inches; head and neck chestnut, interrupted by a broad band of rich green proceeding from each eye, and meeting at the back of the neck; this band is bounded above and below by a line of pale buff, which proceeds from the back; upper parts of the body minutely pencilled with black and white; some of the scapulars, tertials, and primaries dark brown; a white bar crosses the wing; beauty-spot green and purple, bounded by black; upper tail-coverts black, with chestnut edges; tail deep brown, under parts white, the breast studded with round black spots; sides and flanks powdered with black.

This miniature Duck is no less remarkable for the delicate beauty of its plumage, than for the savoriness of its flesh. It resides in our fresh waters the whole year, feeding chiefly at night, in moist meadows and stubble-fields, and breeds on some dry hillock, sheltered by bushes. Its eggs are buff-white, eight or ten in number.

ANAS PENELOPE. *The Wigeon.* (Plate XIX.) Length

eighteen inches; forehead and crown buff-white; chin and throat black; the rest of the head and neck rich orange-brown; upper parts white, minutely pencilled with black; wing-coverts white, terminated by a line of black; quills dark brown; beauty-spot green, edged with black; tertials velvet-black, with a white border; under parts white, pencilled with black on the sides and flanks; under tail-coverts black.

Mr. Waterton has shown that the Wigeon differs from our other Ducks in the nature of its food, and in the time of procuring it. It feeds in the day-time, and its food is grass. Large flocks migrate to this country from the north, arriving all through the autumn, and returning in March or April; a few pairs only breeding in the northern parts of Scotland. The Wigeon is considered to afford the sportsman finer sport than any other wild-fowl; and it is esteemed for the table. Its note is a shrill whistle.

OIDEMIA.

Gen. Char. Beak much swollen at the base, which is raised and knobbed, depressed towards the tip; nail long and flat,

bent down at the point; laminæ broad, strong, not apparent externally; nostrils oval, large, placed near the middle of the beak; wings pointed, hollow; tail pointed, short, stiff; legs placed far behind; feet large; hind toe furnished with a wide lobated membrane.

OIDEMIA NIGRA. *The Common Scoter.* Length nineteen inches; beak black, ridge of the upper mandible orange; legs and feet black; whole plumage deep black, with a blue gloss on the head and neck.

The Scoters, one or two other species of which occasionally visit these islands, are essentially marine Ducks, feeding on shelled mollusca, chiefly bivalves, which they obtain by diving. They scarcely ever leave the sea, except for the purpose of incubation. The flesh is too fishy to be much esteemed; yet it is eaten by some, and many are taken for this purpose by the fishermen, who frequently find them entangled in their nets. Neither of the species breeds in this country.

FULIGULA.

Gen. Char. Beak moderately long, broad, depressed towards the point, where it is slightly dilated; laminæ broad, but con-

sealed; nostrils not far from the base; wings short, pointed; tail short, rounded, rather rigid; legs flattened sideways; outer and middle toe lengthened; hind toe furnished with a large membrane.

FULIGULA FERINA. *The Pochard.* Length nineteen inches; beak black at the base and tip, pale blue in the middle; eyes red; legs and feet blue; head and upper part of the neck reddish-chestnut, bounded below by black; upper parts freckled and pencilled with grey on a white ground; primaries dark grey, tipped with dark brown; secondaries grey, tipped with white; rump and tail-coverts black; tail dusky; under parts white, minutely pencilled with grey; under tail-coverts black.

The terms Dun-bird and Red-headed Poker are provincially applied to this Duck, which is very abundant in the eastern and southern counties during winter. As its flesh is of superior excellence, many thousands are taken in the fens, by decoys and by other means, and find their way to the London market. It frequents inland lakes, the mouths of rivers, and the creeks and harbours of the coast, feeding on crustacea and mollusca. In some of our extensive marshes, the Pochard remains to breed; making a nest among the rushes, and laying ten or twelve eggs.

FULIGULA MARILA. *The Scaup Duck.* Length eighteen inches; beak pale blue; eyes yellow; head, neck, and upper breast and back, black, glossed at the sides with rich green; back and scapulars varied with zigzag lines of white on black; the white being less on the wing-coverts, and gradually lost on the rump; the tail-coverts and tail black; wing black, with the beauty-spot pure white; lower breast and belly pure white; vent peneilled with black; under tail-coverts black.

This species does not differ much in habit from the other marine Ducks, visiting our southern shores in winter, with many other species. Its flesh is in no esteem, being coarse and fishy.

FULIGULA CRISTATA. *The Tufted Duck.* Length seventeen inches; head, neck, and whole upper parts black; sides of the neck glossed with purple; a hanging crest depends from the hind-head; a narrow bar of white crosses the wing; breast, belly, and sides pure white; vent and under tail-coverts black.

The observations made on the Scaup Duck will well apply to this species, except that its flesh is excellent, although its food is the same. It is not recorded to have bred in this country.

FULIGULA CLANGULA. *The Golden-eye.* Length nineteen inches; beak bluish-black; eyes golden-yellow; feet yellow with black membranes; head and upper neck rich green; chin and throat black; an oval patch of pure white on each cheek; lower neck white; back and rump blue-black; tail greyish-black; wing-coverts black at the base white at the tip; primaries and tertials black; secondaries and scapulars white, the latter margined with black; under parts pure white; marked with ashy on the flanks. The female has the tints duller, and the contrasts less conspicuous; and she has no trace of the white on the cheeks.

The Golden-eye is one of the most common of marine Ducks that visit us in flocks on the approach of winter; it is an active little bird, an expert diver, and very watchful. Its food consists principally of small fishes, and hence its flesh is not in high estimation. It does not breed with us, but in Norway; it lays in holes of trees, such as those chiselled out by Woodpeckers; and the old bird is said to carry her young ones down to the water in her beak.

MERGUS.

Gen. Char. Beak slender, tapering to the point, which, with the nail, forms a hook; edges cut into strong serratures pointing

baekwards ; nostrils oblong, near the middle of the beak ; wings pointed, first and seeond quills nearly equal ; legs short, plaed behind ; feet large ; hind toe lobed.

MERGUS ALBELLUS. *The Smew.* (Plate XIX.) Length seventeen inches ; general plumage white ; a black patch between the beak and the eye ; the plumage of the hind head is prolonged into an ample but pendent crest, which is marked with a stripe of greenish-black ; back black ; rump, tail, and its coverts grey ; at the junetion of the neck with the body is a crescent of black descending on each side, and near the shoulder another ; scapulars edged with black ; great coverts and secondaries black, tipped with white ; primaries blackish ; tertials grey, deepening in tint interiorly ; sides and flanks narrowly barred with grey. The female has the crown reddish-brown, and the nape and back ashy-brown.

The Smew or White Nun is one of our rare winter visitors, oceurring sparingly on our eastern coasts. Its manners are little known.

MERGUS MEGANSER. *The Goosander.* Length twenty-six inches. Back scarlet ; the ridge and the nail black ; legs and feet orange ; eyes red ; head and neck glossy green ; back and scapulars black, merging into grey on the

rump and tail ; wing eoverts, secondaries, and tertials white ; primaries black ; whole under parts delicate bay.

None of the members of the genus *Mergus* can be considered other than as rare visitors to our shores ; this species is, however, rather less uncommon than the rest. In the northern parts of Scotland some appear every winter, and a few pairs occasionally remain to breed in the Hebrides and the Orkneys. The eggs are of a pale buff colour ; a heap of grass, and other coarse materials gathered near the water's edge, forms the nest. Fishes constitute the prey of these maritime birds, which their strong toothed beak enables them to capture and to retain.

CHAPTER XIII.

SYSTEMATIC ARRANGEMENT.

BEFORE we dismiss our subject, it may be useful to add a synopsis of the Orders and Families of Birds, as they are divided and arranged in modern systems, with the technical characters of those which are represented by British species. Thus the young student will be enabled, with the greater facility, to identify any specimen that may fall into his hands ; first ascertaining to what Order it belongs, by applying to it the respective ordinal characters : after which its Tribe, Family, Genus, and Species may be successively determined by a similar process of examination. And these efforts, though at first they may often seem difficult and unsuccessful, and may be thought more slow and unsatisfactory than the process of guessing at the genus, and

applying at once the specific descriptions, or comparing the specimen with a figured representation, will yet be found ultimately to be far preferable to the latter modes of proceeding, accustoming the student to a scientific induction, enlarging his knowledge of science, and affording a valuable exercise of mental power.

The class of Birds, AVES, is divided into seven Orders, viz. :—

RAPTORES.

INSESSORES.

SCANSORES.

GYRATORES.

RASORES.

GRALLATORES.

NATATORES.

Order I. RAPTORES.

Beak strong, hooked, enveloped in a cere at the base; feet muscular, armed with powerful curved talons. Feed on flesh. Females larger than males.

Fam. I. *Vulturidæ*.—Eyes even with the head; tarsi covered with small scales; beak lengthened, hooked only at

the end; talons comparatively weak; head and neck more or less bare of feathers; wings ample. Feed on dead flesh, often in a putrid state. Diurnal.

Fam. II. *Falconidæ*.—Eyebrows projecting; head and neck clothed with feathers; beak strongly hooked, furnished with a projection more or less tooth-like; talons much hooked and powerful. Prey on living animals. Diurnal. (See page 57.)

Fam. III. *Strigidæ*.—Head large, with broad dilated eyes, directed forwards, set in a circle of radiating feathers; ear-orifice very large; plumage lax and downy. Prey on living animals. Nocturnal. (See page 258.)

Order II. INSESSORES.

Feet formed for perching; beak generally in form of a cone, more or less lengthened; size small. Food various.

Tribe I. FISSIROSTRES.

Beak short, broad, and flattened; the gape very deeply cleft; upper mandible not notched. Feed chiefly on insects.

Fam. I. *Caprimulgidae*.—Beak minute; gape enormous, usually set with bristles; eyes large; wings long and pow-

erful; feet very small; plumage lax and downy; commonly pencilled with minute variations of sombre colours. Feed on insects. Nocturnal. (See page 111.)

Fam. II. *Hirundinidæ*.—Beak small; gape wide; wings very powerful; feet small; plumage close, glossy, and metallic. Feed on insects. Diurnal. (See page 178.)

Fam. III. *Tolidæ*.—Not represented in Britain.

Fam. IV. *Trogonidæ*.—Not represented.

Fam. V. *Halcyonidæ*.—Beak stout, pointed, angled; feet small and feeble; middle toe united to the outer; wings feeble; form robust; head large. Feed on fishes. (See page 128.)

Fam. VI. *Meropidæ*.—Beak long, slender, tapering, slightly curved; wings long, pointed. Feed on large insects, captured on the wing. (See page 126.)

Tribe II. TENUIROSTRES.

Beak long, slender, compressed, frequently curved; not notched at the tip. Tongue sometimes divided at the tip into filaments. Feed on insects, and on the nectar of flowers.

Fam. I. *Nectariniadæ*.—Not represented.

Fam. II. *Trochilidæ*.—Not represented.

Fam. III. *Meliphagadæ*.—Not represented.

Fam. IV. *Certhiadæ*.—Beak slender, strong, sharp-pointed, curved in various degrees; tongue capable of protrusion, not divided at the tip. Feed on insects. (See page 253.)

Tribe III. DENTIROSTRES.

Upper mandible of the beak notched near the tip. Feed chiefly on insects, sometimes also on berries.

Fam. I. *Sylviadæ*.—Beak slender, tapering to the point; both mandibles having the vertical outline slightly arched, and the lateral outline slightly incurved; the tip perceptibly notched; power of flight feeble; form slender and elegant; size small; mostly musical. (See page 75.)

Fam. II. *Turdidæ*.—Beak as long as the head, compressed; upper mandible arched; tip not abruptly hooked; a well-marked notch, but no tooth; gape bristled; feet long, with curved claws. Feed on snails, worms, berries, as well as insects. Size much larger than the preceding. Mostly musical. (See page 35.)

Fam. III. *Muscicapadæ*.—Beak broad at the base, tapering to the point, flattened; the tip generally hooked, and distinctly notched; the gape set with bristles. Feed on

insects, which they capture in flight, but return to repose to eat them. (See page 110.)

Fam. IV. *Ampelidæ*.—Beak stout, broad, flat, the ridge angular, the tip distinctly notched; feet stout; the middle toe partly united to the outer. Feed principally on berries and soft fruits.

Fam. V. *Laniadæ*.—Beak strong, arched, abruptly hooked, notched and toothed; claws fine and sharp. Habits predatory; feed on small birds and mammalia, as well as large insects. (See page 108.)

Tribe IV. CONIOSTRES.

Beak varying in form; but for the most part short, thick, and strong; more or less conical, and generally destitute of a notch. Feed principally on seeds and grains.

Fam. I. *Corvidæ*.—Beak powerful, compressed, conical, rather long; upper mandible arched; nostrils covered by stiff bristles pointing forwards; wings powerful; feet formed for walking, robust. Appetite omnivorous. (See page 41.)

Fam. II. *Paradiseadæ*.—Not represented.

Fam. III. *Sturnidæ*.—Beak nearly straight, stout at the base, diminishing regularly to a sharp point; the ridge

ascending on the forehead ; feet robust, formed for walking. Feed much on worms and larvæ. (See page 47.)

Fam. IV. *Fringilladæ*.—Beak short, thick, powerful ; mandibles nearly equal ; feet formed for perching, slender. Size usually small ; colours often brilliant ; frequently musical ; feed principally on seeds. (See page 12.)

Fam. V. *Coliadæ*.—Not represented.

Fam. VI. *Musophagadæ*.—Not represented.

Fam. VII. *Bucerotidæ*.—Not represented.

Order III. SCANSORES.

Toes set in pairs, the outer toe being directed backward like the thumb ; more or less able to climb trees ; feed chiefly on insects, or on fruits.

Fam. I. *Rhamphastidæ*.—Not represented.

Fam. II. *Psittacidæ*.—Not represented.

Fam. III. *Picidæ*.—Feet short, strong, rigid, adapted for clinging to the trunks of trees ; beak straight, angular, hard, wedge-shaped ; tongue projectile ; tail of ten feathers, rigid, elastic, pointed. Penetrate the wood of trees for insects. (See page 113.)

Fam. IV. *Cuculidæ*.—Beak deeply cleft, compressed,

areheds; tail long, not rigid; wings short and rounded; gait between perching and climbing. Feed on soft insects, and small vertebrate animals. (See page 112.)

Order IV. GYRATORES.

Beak vaulted; nostrils pierced in a large membranous space, covered with a cartilaginous scale; tail of twelve feathers; wings powerful; feet formed for perching; hind toe on the same level as the others. Monogamous. Feed on grain, mast, and berries. Build on trees, and lay two eggs.

Fam. I. *Columbadæ*. Beak somewhat slender, swollen towards the tip, which is curved downwards; base of upper mandible covered with a soft skin, inflated on each side, in which the nostrils are pierced. Feet short; toes three before and one behind; no spurs. Form graceful; plumage soft and smooth. Voice a mournful cooing. (See page 248.)

Order V. RASORES.

Beak vaulted, nostrils covered with a scale; wings short and powerless; feet stout, formed for walking; hind toe placed above the level of the others; tail of fourteen to eighteen feathers; plumage often metallic. Polygamous. Build mostly

on the ground, and lay many eggs. Feed on grain, the buds of trees, and insects.

Fam. I. *Cracidae*.—Not represented.

Fam. II. *Megapodidae*.—Not represented.

Fam. III. *Phasianidae*.—Beak arched; nostrils covered with a smooth, vaulted, horny, naked scale; feet large and powerful; tarsus naked; covered in front with large plates; and furnished with one or more curved and pointed spurs; tail of eighteen feathers. Feed on grain. (See page 133.)

Fam. IV. *Tetraonidae*. A naked space above the eye, commonly of a bright red hue; tail generally short; hind toe small and weak. Breed on the ground, and lay many eggs; habits generally terrestrial. Feed on buds of trees, and various seeds and grains. (See page 198.)

Fam. V. *Chionididae*.—Not represented.

Fam. VI. *Tinamidae*.—Not represented.

Order VI. GRALLATORES.

Tibia and tarsus greatly lengthened; the former, at its lower extremity, destitute of feathers, and covered with regular plates, like the latter; neck commonly long, as is also the beak, but less generally; wings in most cases long and powerful; but the

power of running is chiefly developed. Habits of most, aquatic, wading; some are able to swim. Food various; chiefly grain and seeds, or else small aquatic animals.

Fam. I. *Otidæ*.—Neck long; beak stout, and vaulted; legs and feet long, and stout; hind toe wanting; wings short, hardly capable of flight; general form stout and heavy. Affect extensive plains; run swiftly. (See page 180.)

Fam. II. *Charadriidae*.—Feet long and slender; toes comparatively short; hind toe wanting, or rudimentary; wings long, pointed and powerful. Head large; eyes placed far back; beak short; basal half soft; outer part abruptly swollen. Chiefly affect dry plains, and moors. (See page 181.)

Fam. III. *Ardeidae*.—Neck slender and flexible; legs and feet long and slender; beak long, straight, pointed, compressed and powerful; wings long and large; hind toe present. Plumage copious and lax. Feed chiefly on fishes and reptiles. (See page 205.)

Fam. IV. *Scolopacidae*.—Neck comparatively short; beak long, slender, flexible, and sensitive; hind toe placed above the level of the others; wings long and pointed. Affect marshy places, or sea-shores; feed, by probing the soil with the beak, on soft animals. (See page 221.)

Fam. V. *Palamedeadæ*.—Not represented.

Fam. VI. *Rallidæ*.—Body very thin and compressed; beak compressed, frequently running up in a sort of shield on the forehead; tail very short; wings short, rounded and hollow; feet large and powerful. Very aquatic in habits; most of them swim with perfect facility. Feed on aquatic animals, grain, and seeds. (See page 129.)

Order VII. NATATORES.

Toes united by membranes stretched between them; tarsi flattened sidewise; body depressed; plumage close and dense, besides which the body is covered with a coat of down. Aquatic in habits; the powers of swimming and diving, in general, highly developed; but flight for the most part feeble. Food largely consists of fishes, mollusea, and other inhabitants of the waters; varied in some by grain, seeds, or herbage.

Fam. I. *Anatidæ*.—Beak thick, broad, high at the base, covered with a soft skin, except at the tip, which forms a horny nail; edges cut into a sort of teeth; tongue large and fleshy, with toothed edges; neck more or less lengthened. Inhabit both fresh and salt waters; feed on various minute animals, and on vegetable substances. (See page 280.)

Fam. II. *Colymbidæ*. Beak narrow, straight, and pointed; head small; wings short and feeble; tail very short or

wanting; legs placed very far behind; toes webbed, or bordered with a membrane; plumage close and satiny. Still more aquatic than the former; they walk and fly with difficulty, but swim and dive with great celerity. Inhabit fresh and salt waters. (See page 149.)

Fam. III. *Alcadæ*.—Beak compressed; wings short, sometimes rudimentary; tarsi very short; feet small; toes entirely webbed; hind toe small or wanting. In diving, which these birds do with great power, the feet are not used, the wings being the organs of progression, in the manner of fins. Habits marine; breed on rocky precipices, in great numbers. (See page 151.)

Fam. IV. *Procellariadæ*.—Beak apparently formed of several pieces; basal portion of upper mandible separated from the tip by a deep oblique furrow; nostrils terminating in one or two tubes, projecting from the beak; tip in the form of a curved and pointed claw; lower mandible similarly seamed, and its tip hooked downward; fore toes webbed; hind toe rudimentary, and elevated; wings long and powerful. Habits oceanic; rarely approaching land except to breed. (See page 166.)

Fam. V. *Laridæ*.—Beak slender, compressed, gradually bent; nostrils pierced in the middle; wings very long and

pointed; hind toe small, elevated, and free. Of large size for the most part; powers of flight and walking principally developed; those of swimming and diving very slightly exhibited. Some of the species haunt the land. (See page 158.)

Fam. VI. *Pelecanidæ*.—Beak long; nostrils merely slits, hardly discernible; face more or less naked; skin on the throat generally dilatable; hind toe capable of being turned forward; all four united by membrane; wings long and powerful. Marine in habits; feed on fishes; perch on lofty trees, or on rocks. (See page 155.)

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